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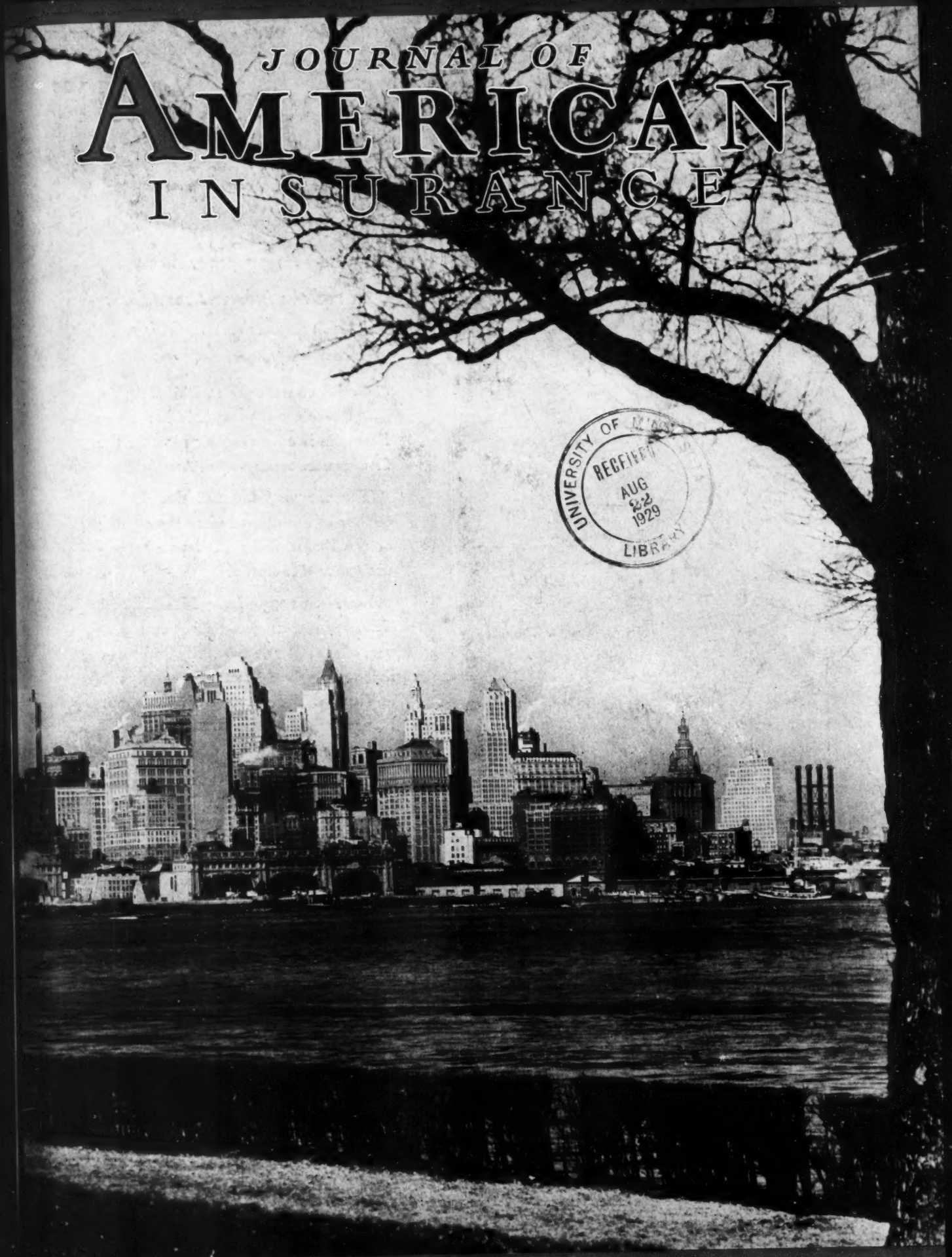

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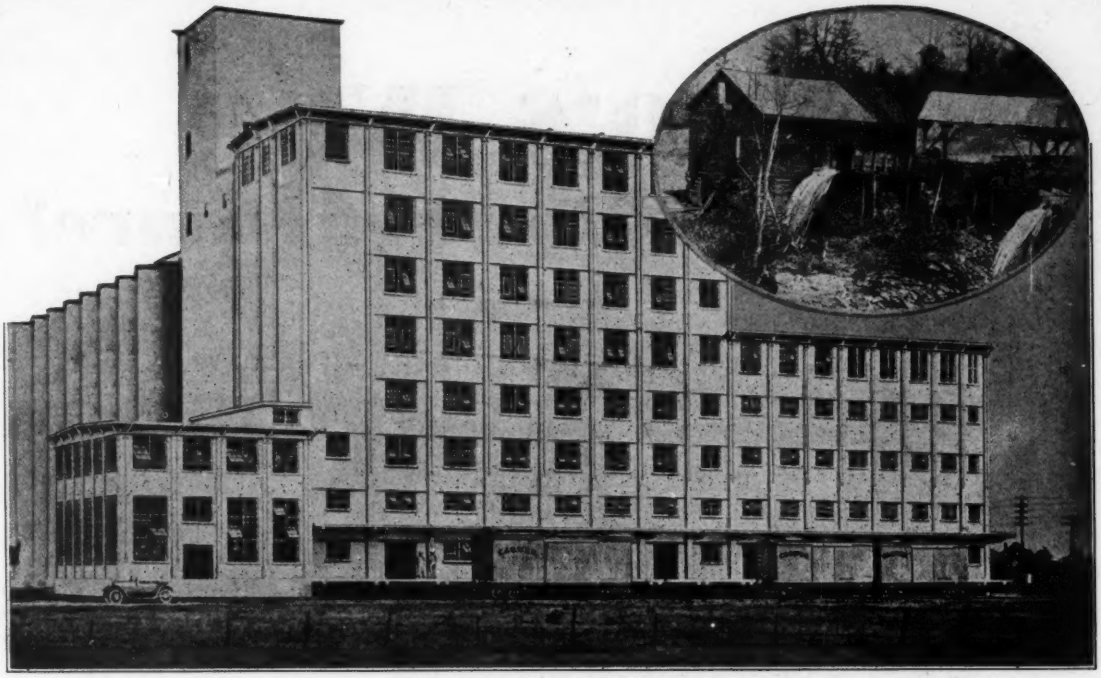

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Editorial and Advertising Offices:
180 N. Michigan Ave., Chicago, Ill.

Terms of Subscription: 25 cents per copy; $2.50 per year in the United States; $3.00 per year in Canada; $4.00 in other countries.

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Recognized as one of the ablest and most popular commissioners in the United States. Colonel Dunham is widely known through his connection with many clubs and other organizations, and because of his efficient administration of his office. He is an authority on his subject, being the author of three volumes dealing with "The Business of Insurance."

The Aftermath of the Glorious Fourth

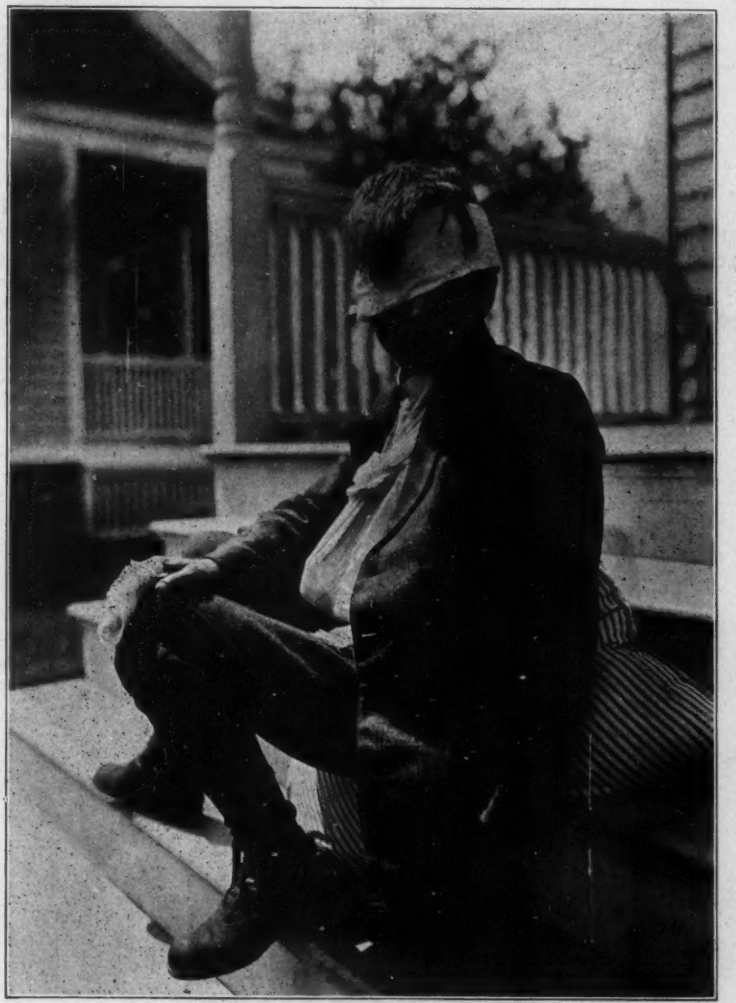
Death and Smoking Ruins Too Often are the Result of Efforts of the Populace to Celebrate the Nations Anniversary

By ALBERT W. FRIBOURG

SINCE the day that the fathers of our country signed the Declaration of Independence, and then made whoopee with fireworks, more Americans have been killed celebrating Independence Day than perished in the Revolutionary War.

The glorious Fourth has been expensive for America. Thousands of non-combatants have lost their lives, and thousands of others have been permanently crippled because they followed the old custom of making merry with fireworks. Toy pistols, toy bombs, and miniature balloons have proved as deadly as the real ones used in actual warfare.

The list of dead and injured, published shortly after July 4th, is read with comparative equanimity by people who would be extremely shocked at a maritime, or train disaster resulting in an equal loss of life. And this is because Fourth of July accidents have been so frequent, and so regular that the average citizen expects to find descriptions of them in his newspaper. It is the unexpected which is shocking.



If There Is No Blood Poisoning from the Cuts, If the Burns Heal Up and the Broken Bones Knit, Then the Day Was a Success.

Campaigns sponsored by associations of private citizens, and laws passed by many city and town legislative bodies have cut the list of fatalities to a degree beyond the expectations of the people who backed them. In our capitol city, for example, 104 persons were treated in the local hospitals for injuries sustained during one day's celebration of the Fourth. The next year, after the sale, and discharge of fireworks in Washington was regulated by law, not one person came to the hospitals for treatment. There was a notable absence of the usual smoke and din incident to the day. The Capital in general breathed a sigh of relief.

Unfortunately, all legislation governing the celebration of Independence Day is not equally effective. The majority of such laws decrease, rather than eliminate the chance of fatalities. But the fact that only the passage of adequate legislative measures, and their rigid enforcement can finally make the celebration of Independance Day non-hazardous has been clearly demonstrated.

IT is just a quarter of a century since the American Medical Association began its propaganda for a safe and sane celebration of the Fourth. Before then, some sporadic attempts had been made to regulate the discharge of fireworks, but these efforts had neither been sufficiently sustained, nor emphatically enough advanced to make them effective. In the years preceding 1903, when the American Medical Association entered the field, the number of dead and injured had continually increased. According to the records of this organization, there were 466 deaths and 3,893 injuries after the celebration of July 4, 1903. In a little more than five years, this figure had been cut by more than half.

In contemplating the following statistics* compiled by the American Medical Association, as well as other tabulations of July 4th fatalities, it should be remembered, that the failure of many doctors to report on patients privately treated, as well as the absence of data from many outlying communities, necessarily make the figures incomplete. But the story that they tell is at least representative of what has been accomplished:

*See Table Next Page.

*Year	Dead	Injured	Total
1903	466	3,983	4,449
1904	183	3,986	4,169
1905	182	4,994	5,176
1906	158	5,308	5,466
1907	164	4,249	4,413
1908	163	5,460	5,623
1909	215	5,092	5,307
1910	131	2,792	2,923
1911	57	1,546	1,603
1912	41	947	988
1913	32	1,131	1,163
1914	40	1,466	1,506
1915	30	1,135	1,165
1916	30	820	850
Total for fourteen years	1,892	42,909	44,801

But although the number of fatalities has been steadily decreasing during the last quarter of a century, the statistics issued by the American Medical Association appear to be somewhat over optimistic when compared with statistics compiled by other organizations. The American Museum of Safety reported a toll of 195 deaths, and 3,179 injuries resulting from Independence Day celebrations in 1927. It is estimated by good authority that 239 persons were killed in Fourth of July accidents in 1928. The great variation between the statistics issued by the various organizations engaged in the work of decreasing holiday accidents is due, first to the impossibility of securing complete reports, and secondly to the type of accident included in the list. There has recently been a tendency to include automobile and drowning accidents in the grand total for Fourth of July accidents.

In its 1927 report, however, the American Museum of Safety has confined itself to a report of the deaths and injuries occurring only from the use of fireworks. The survey made by this organization shows that of the 195 killed, 31 were children under the age of six, and 122 were between the ages of six and twenty. Forty-eight of the victims were burned to death, their clothing becoming ignited by the so-called "harmless" sparklers, and other fireworks. Blank cartridges were almost as fatal as burns, causing 46 deaths. Fire-crackers took the life of 22, while the eating of fireworks by very small children caused the death of sixteen through phosphorus poisoning.

Getting It All Ready to "Faw Down and Go Boom"

IF the firework display were limited to one day, the accident rate would be materially decreased. But many people begin the celebration of Independance Day ahead of time, and continue it for several weeks after the Fourth. In 1927, the American Museum of Safety lists 27 deaths and 405 injuries resulting from celebrations before or after the Fourth. Despite the earnest work of organizations and individuals to abolish the use of fireworks, many citizens and their children still continue to set off fire-crackers, not only on Independence Day, but throughout most of the month of July.

When the signers of the Declaration of Independence arranged for the first fourth of July display of pyrotechnics in 1776, they entrusted the discharge of the fire-crackers, Roman candles, and other displays to a group of British prisoners. Commentators have remarked ironically that the celebration of Independence Day was staged by the British, but perhaps, after all, there was method in the arrangement. The British soldiers knew how to handle fireworks, and firearms, and besides, the life and limbs of American soldiers could not be risked in mock warfare, when there were actual battles to be fought. So the British soldiers set off the fireworks (without any reported mortality), the signers of the independence declaration enjoyed the display of feux de joie, and all residents of Philadelphia were ordered to return to their homes, and to have their lights extinguished by eleven o'clock. The city tried to protect itself against rioting, and the danger of fire.

Today, the handling of fireworks is left largely in the hands of children. Children who must still be wheeled in carriages are given certain "harmless" fireworks to play with. And every year, parents who unwisely encourage their children to celebrate the Fourth, too early in life, remember Independence Day thereafter only as a day of sorrow. Toddlers, and other children, who have not yet reached the age of discretion, are allowed to set off fire-crackers, and to handle toy pistols and cannons. The explosion of these toys often results in lockjaw. Last year, tetanus was one of the outstanding causes of fatalities. In Erie, Pennsylvania, a city of 142,000, there were eight deaths from lockjaw.

Such deaths are entirely preventable. Even after an accident has

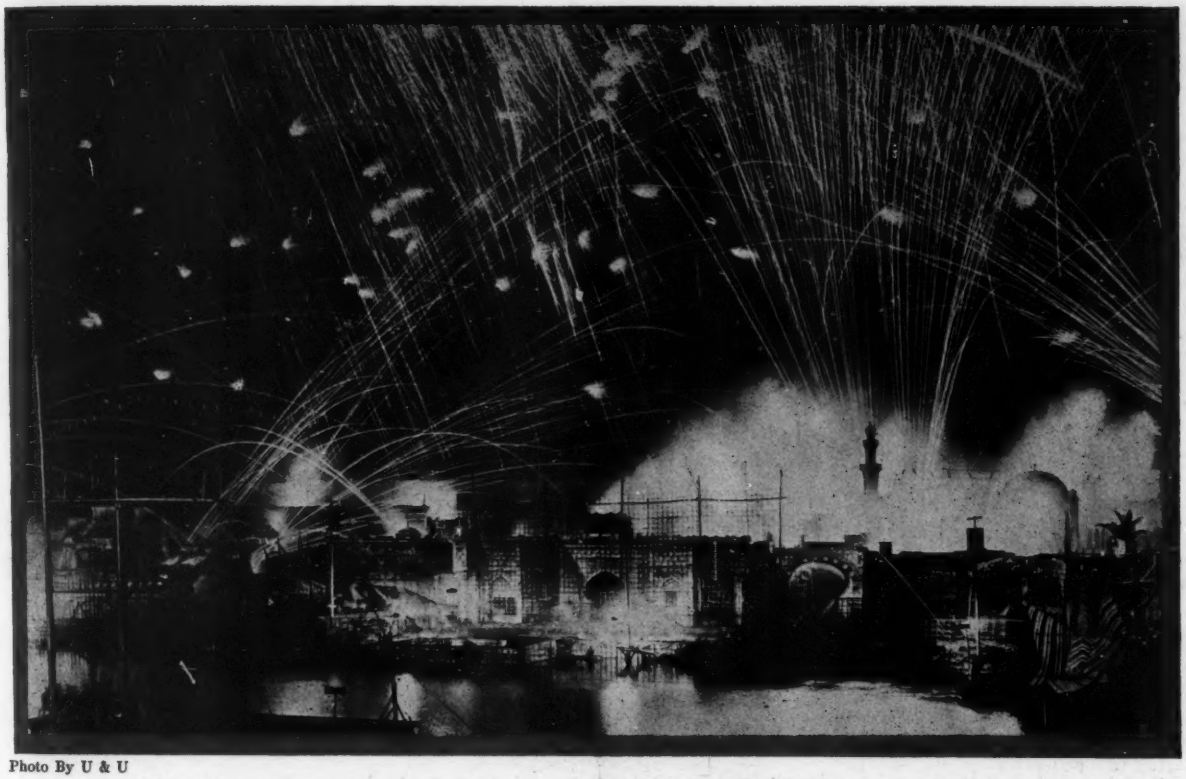


Photo By U & U

Still, of Course, There is Something to be Said for the Beauty of a Well-Directed Exhibition of Pyrotechnics

occured, the victim can be saved if proper treatment is given in time. A serum which will prevent lockjaw has been in use for many years. and is a certain means of preventing the disease. But children and adults who are careless in handling fireworks, are too often also careless in caring for their wounds. Because of this, deaths from lockjaw, which could be entirely eliminated, are frequently one of the major causes of fatalities.

Sparks from fireworks igniting the flimsy dresses of little girls cause many deaths every year. Children, who during other seasons would never be allowed to play with fire, are permitted to set off fire-crackers in honor of the Fourth.

WHEN the agitation against the sale and use of fireworks first became effective, many communities banned the sale of all but a few so called "harmless" fireworks to individuals, and to make up for this lack of fireworks, arranged for a community display. Men who were experienced in handling pyrotechnics were hired to put on the show, and every possible precaution was taken by officials anxious to have both a safe and sane Fourth, and a display of fireworks besides. In some cases, the plan worked; in too many others, it failed.

In two adjacent suburban communities, however, public displays of fireworks, arranged by local officials, caused the death of four persons, and the injury of two others within two years. Many other communities have had similar experiences.

Plans for the displays of fireworks which resulted so disastrously were most carefully made. The fireworks were set off at the end of a hundred foot pier, and spectators were not allowed within a wide radius of the foot of the pier. The fireworks were directed over the water, and the harbor policemen kept what was believed to be a sufficiently large space clear of canoes and rowboats filled with people out to see the show. One of the fireworks miscarried, however, and fell into a canoe where it burst, killing two of the occupants, and injuring two other persons. This accident, of course, was somewhat of a freak. There had been no wind when the display was started, and every other one of the pieces had fallen harmlessly into the water. But freaks must be taken into consideration.

The next year, another accident which never should have happened, caused the death of one man, and the serious injury of a boy. The man had been engaged to set off the fireworks. He was experienced, and had never before had an accident. But one giant fire-cracker exploded prematurely, killing him instantly, and fatally injuring a boy who had won his way into the good graces of the fireworks operator, and had been allowed to help.

Community displays of pyrotechnics are, however, safer and perhaps saner than the promiscuous discharge of fireworks by young and old. But, although, the loss of life has decreased since the passage of legislation, the loss to property has increased. The Actuarial Bureau of the National Board of Fire Underwriters has made the following tabulation which shows an almost steadily mounting cost of the use of fireworks. And these figures, it is estimated, represent only 80% of the actual loss.

Year	Loss Due to Fireworks
1915	$260,519
1916	275,409
1917	221,904
1918	279,391
1919	462,631
1920	688,114
1921	573,595
1922	775,205
1923	639,131
1924	904,825
1925	829,613
1926	718,942
1927	894,663

So long as any fireworks are sold, the fire hazard on July 4th will be enormous. A few years ago, a child

was playing with a bunch of fire-crackers in the city of Dorchester, Massachusetts, and was having a most delightful time, until one of the fire-crackers set fire to his home. This house was one of a block of wooden structures, and before the firemen had put out the fire twenty-seven other houses had been damaged, and five of them were completely destroyed.

A year later, another group of celebrants released a paper balloon just after nightfall, and were thrilled when they saw it burst into flames. The flaming balloon against the dark sky made a pretty sight. But when the still burning balloon fell on the roof of a somewhat distant farm-house, and started a fire which made the family homeless, everyone was less joyous.

SUCH accidents were not infrequent in previous years. The Fourth of July has never been the most popular day of the year for firemen. Even today, when restrictions have cut down the loss of life, there are still enough fires in buildings to keep fire-fighters working overtime. Toy balloons, and other of the more highly dangerous fireworks have generally been outlawed. But a few of them are still included in some pyrotechnic displays.

To anyone who has studied the accident records of July 4th, it is obvious that the only way of making the celebrations of the birth of our nation safe is to discourage the display of fireworks, not only by individuals, but by communities, clubs, etc. No sane person would think of fooling with dynamite, yet perfectly sane people endanger their lives, and their children's lives by carelessness, or incorrect handling of fireworks.

New York City has been distinctly successful in restricting and discouraging the use of fireworks. The city both regulates the display of fireworks, making it illegal to discharge fireworks without a permit, and also so closely regulates the sale of pyrotechnics, that many persons failing to find them at a convenient store, decide to celebrate in some different way.

A permit must be issued for every display whose wholesale market value exceeds $2. When such a permit is granted, the names of the persons who are to discharge the fireworks, the place and time of the display, the distance to be reserved between the place of discharge, the bystanders, and nearby buildings, and the wholesale market value of the fireworks must be stated. No permit is issued for the display of fireworks in a street which is less than 80 feet in width between the building lines, or within a radius of 1,000 feet of any hospital. No permit is necessary for small displays.

But because the sale of fireworks is so closely regulated, there are few of these small displays. Before the city ordinance went into effect every small neighborhood candy and cigar store carried a complete line of fireworks. Roman candles, magic powders, giant torpedoes, and all the other devices designed to lend excitement to Independence Day were for sale long before July 4th, and the fireworks that remained were for sale long afterwards. Now the Code of Ordinances of the city places the following restrictions on the sale and storage of fireworks:

Permit:—No person shall store or sell fireworks without a permit.

Restrictions:—No permit under this section shall be issued for any premises:

(a) Which are occupied as a tenement house, school, workshop, factory, theatre or other place of public amusement or assembly;
(b) Which are not equipped with an approved system of automatic sprinklers;
(c) Which are of wooden construction;
(d) Which are artificially lighted by any means other than electricity;
(e) Where cigars, cigarettes or tobaccos are kept for sale;
(f) Where paints, oils, varnishes, lacquers or inflammable liquids are manufactured, stored or kept for sale;

(*Continued on page 29*)

Photo By U & U

Washington D. C. Puts on a Display Which Dwarfs the Famous Monument.

Photo By U. & U.

The New York Stock Exchange Where Much of the Nation's Financial History Is Made

Is Investment Hedging Possible?

The Theory and Practice of Investment as Viewed in the Light of Development of the Past Decade

THE past decade has witnessed a marked increase of interest in the theory and practice of investment. This has become a subject of wide public concern, and with the growth in the area of interest we have had more frequent and more exhaustive attempts to analyze investment procedure and to place at the disposal of the layman a body of principles which we can invoke to guide him in his commitments.

It is hardly necessary to point out that this development is the result of revolutionary changes in the forms of ownership, in the amount of capital available for investment, and in the extent of acquisition of equities in enterprise without direction or control on the part of the investor. Times have changed since the family nest-egg was hidden under a loose hearthstone or loaned directly on mortgage. The ability to purchase fractional proprietorship in the nation's leading industries has so broadened the field of investment interest and so increased the number of direct actors that "Wall Street" is no longer an adequate or sufficiently inclusive phrase to define the origin and magnitude of invested funds.

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By
JOSEPH STAGG LAWRENCE

Since negotiable obligations have taken their place as investment mediums, a number of traditions have developed which have become so intrenched in the minds of conservative investors that the course of events and the pleas of financial writers have had less effect than they apparently merited.

The strongest of these traditions holds that bonds on the whole are a safer form of investment than stocks, that the latter may have some advantages in a period of rising prices while the former benefit from a period of falling prices, and that the element of chance, the possibility of loss, and the uncertainty of income are the normal accompaniments of stock investments. So long as this tradition dominated investment thinking, stocks were on the defensive. Recently this financial commandment has been challenged. It has been pointed out that diversification eliminates the element of risk in stock investment, that the persistent absorption of earnings by enterprise has been so substantial as to compensate any decline in equity due to falling prices, and that the established upward secular trend of prices makes the common stock the investment medium par excellence.

IT MAY well be that the common stock in the earlier period concealed its light beneath a basket and that its true virtues were not generally appreciated. It is also possible that the bond was given a certificate of merit which it did not entirely deserve. The reaction has set in. The stock holds the centre of the stage and the bond is in eclipse—at least for the time being. It is our purpose to examine this new turn to determine if the movement may not be going to an extreme in its condemnation of bonds and its exaltation of stocks.

Can the investor afford to cast aside the empirical financial prepossessions of generations and embark on an investment program which will leave bonds entirely out of account? Will the purchase of stocks alone with the aid of intelligent investment counsel and average good fortune in the turn of events, assure that ultimate safety of principal, that certainty and uniformity of income, and that continuous opportunity to liquidate without serious loss which con-

stitute the triple goal of investment intelligence? Is it possible through some apportioning of our investments between stocks and bonds to eliminate the effects of changes in the purchasing power of the monetary unit upon our capital fund? These are questions which the far-sighted investor, impressed but not swept away by the present demonstration of stocks, would like to see answered.

I

LET us consider first the factors which affect the value of stocks over a long period of time. Undoubtedly there has been a persistent upward trend, most evident since 1921, which has provided a rate of appreciation often in excess of the cash dividend. The combination of appreciation and dividends has made stocks appear incomparably superior to bonds. Evidence has been adduced that even in periods of falling prices when, according to highly-respected tradition, stocks were inferior to bonds, the factor of appreciation has turned the balance in favor of stocks. The apparent superiority in periods of falling prices has led some writers to discard fluctuations in the general price level as a major factor in the determination of stock values. Edgar Lawrence Smith emphasizes almost exclusively the reinvestment of earnings as the explanation of this persistent growth of equities.

It is, however, an error to assume that any single cause will supply the key. On the basis of prices paid for stocks, let us grant that *in the past* they have been undervalued, an admission, be it noted, which is made without prejudice to the proposition that at present prices stocks may be overvalued.

The students of investment have failed to appreciate that it is possible for the equity behind a share of stock to mount in value, even though the management pays all earnings in the form of dividends and the general level of prices remains absolutely stable.

The reinvestment-of-earnings theory ignores the fact that most enterprises have assets which are likely to appreciate as time moves on and population increases, and that such appreciation is independent of any changes in the general level of prices or of the dividend policies of the management.

The assets of any concern may be divided into four more or less distinct categories. In the first let us place all resources of a limited and natural character such as land, power rights, mines, forests, *et cetera*. Our second class we can devote to artificial assets such as buildings, machinery, and inventory. This second group differs from the first in degree rather than in kind. There is no absolute limit to the uses which may be obtained from a given natural asset, while, on the other hand, unlimited production of manufactured goods is impossible. In our third class we shall place certain intangible but important assets such as trade names, franchises, goodwill, priority in the field, patents, and the momentum of established conduct. Finally, we summon the personal elements in the enterprise, management, personnel, and morale. It is perfectly obvious that we have listed as resources some factors which never appear in any statement and others which many conservative establishments customarily omit. Nevertheless, the wise investor does not confine his examination to published balance and income sheets. For the sake of convenience let us refer to the first class of assets as Natural, the second as Artificial, the third as Intangible, and the fourth as Human. These terms are purely arbitrary, and no wish is implied to defend this nomenclature as accurate or as the best which can be devised.

It must be apparent that in a corporation where assets of the Natural type predominate there will be a persistent appreciation in the equities of the common stockholder and that fluctuations in the price level need cause him little fear of permanent depreciation. Where the ratio between natural resources and population is constantly decreasing it is inevitable that such assets should appreciate. A consideration of this factor discloses a partial basis for the rapid rise in the prices of public-utility stocks. The shrewd investor is discounting future appreciation and is willing to sacrifice present income for the sake of the growth in value which he knows will take place, price movements to the contrary notwithstanding. It matters not that such a company pursues an extravagant dividend policy and disburses all earnings as realized. The equity of the stockholder will grow nevertheless. In analyzing the appreciation of common stocks in the past, this factor can not be overlooked. It is probable that it is at least as important as reinvestment of earnings as a source of appreciation. Changes in the general price level may accelerate or retard the rate of growth, but as long as population increases and no substitutes are discovered, the trend will be continuously if unsteadily upward.

JOSEPH STAGG LAWRENCE

is the author of a book on Wall Street and Washington which has just been issued by the Princeton Press. It deals with the present controversy between the stock market and the Federal Reserve Board and examines critically the effect of the Central Bank Policy upon the value of Bonds. Hugh Bancroft, president of the Wall Street Journal says of the book: "A readable and intelligent criticism of the Reserve Board's attitude towards security loans which every investor and business man can understand. Effectively demolishes prevailing misconceptions of the proper purposes and functions of Central Banking authority." George Clarke Cox of the firm Cox and Trainer, Investment Counsel, says: "A bold and unconventional but soundly reasoned attack upon the recent policies of the Federal Reserve Board. It deserves the attention of friend and foe alike and may be recommended to the Congress for prayerful study. Mr. Lawrence's combination of economic knowledge, practical acquaintance with money problems as they affect the national and pungent phrase is unique."

This book will be reviewed in an early issue of the Journal of American Insurance.

ARTIFICIAL assets will register much more plainly the influence of price changes. The value of the plant reflects changes in the cost elements, going up as labor and materials rise and falling as construction costs fall. Original cost is of less importance than the reflected value of contemporary replacement. Stocks on hand and machinery will be affected in the same manner. An enterprise whose assets consist principally of this type will respond more or less, depending upon the relative importance of these assets in the total, to changes in the general price level. The investor should here realize that he is investing in purchasing power and that the fortune of his equities will be tied to the value of the monetary unit. Jobbing and pure trading concerns carrying heavy inventories will fall largely in this category.

While the Intangible assets are often an important source of earning power, they are subject to innumerable economic vicissitudes and it is rather difficult to discover any definite trend in value. Patents expire, goodwill evaporates, vigorous competition impairs the advantage of position. Yet on the whole it is probable that these Intangibles will with the passage of time grow. American Radio, Eastman Kodak and John Wanamaker illustrate the point. Again

there is no necessary connection between such growth and reinvestment of earnings or changing price levels. New capital when needed may be supplied by new issues.

At any time it is, of course, important for the investor to consider the character of management, the labor policy, and all the other Human factors which bear upon the prosperity of a particular enterprise. These factors have no definite trend, and it can not be said that over a long period of time they will tend to push the value of stocks up or down.

It may be seen that only one of our factors is so related to price changes as to affect common-stock values and then only in those enterprises in which it plays a sufficiently important part. Those assets which fall into the Natural and Intangible groups will show a persistent upward trend in any growing country, and the prospective investor may safely assume that any concern which has a preponderance of such assets, particularly of the Natural type, will show a continuous if non-uniform appreciation.

II

THOSE who have identified changes in the values of stocks with rates of reinvestment of earnings and with changes in the purchasing power of money have paid insufficient attention to another factor of importance, i.e., the rate of interest which prevails in the community. The investor who purchases a share of stock never expects to acquire the fractional portion of the assets of the enterprise to which his share entitles him. He is interested in the future yield of the share, both explicit in the form of dividends and implicit in the form of appreciation. In fact, the price which he is willing to pay for such a share depends far more upon the anticipated yield than upon the cost of producing the minute fraction of assets which that share represents. The investor is in effect surrendering present enjoyable income for future income. He has the option of securing an annuity to be converted into satisfactions in the future or realizing immediately the equivalent in goods and services of the price he is willing to pay for the stock. Much depends, therefore, upon the rate which he employes in discounting the future. If a share of stock yields a total dividend both explicit and implicit of $6 and the community rate of interest is 6% then the normal price of the share, other things being equal, will be $100. If the rate of interest should decline to 5%, then the normal price will rise to $120. Obviously the rate of interest has no necessary or direct connection with the rate of reinvestment of earnings, although it is influenced distinctly by changes in the purchasing power of money.

A decline in the value of money is usually accompanied by an increase in the rate of interest, while an appreciation in its value is accompanied by a decline in the rate. These tendencies are illustrated by the low interest rates prevailing in the period of falling prices from 1875 to 1900 and the fantastic interest rates during the period of inflation in Germany after the war. It should be noted that this force is ephemeral and ceases when prices become stabilized upon a new level. Among other influences which bear upon the interest rates are opportunities for the productive employment of capital, the rate at which savings accumulate, and the state of security and general business confidence. This is not the place to examine these influences. Suffice it to say that the interest rate of the community is the resultant of profound forces which are not readily susceptible to prediction.

WE are here examining the effect of interest rates on the prices of stocks and bonds. Since the purchase of a share of stock is the purchase of a perpetual annuity amounting to the anticipated annual dividend, the latter is capitalized at the current rate to determine the normal market price. While the process of capitalization is also applicable to the bond, there is a difference due to the

(*Continued on page 18*)

Courtesy Chicago Stock Exchange

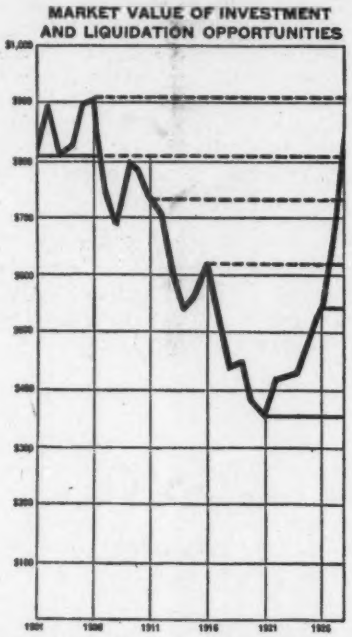
The Chicago Stock Exchange Is Housed in a New Building, With Ultra-Modern Equipment for Facilitating Trading

fact that the bond matures and is redeemed at a definite price. The more remote the maturity, the more susceptible will be the present value of the bond to changes in the interest rate. The earlier the maturity, the less will be the influence of changing interest rates on its value. By arranging for a succession of maturities and investing only in securities of brief tenor, it is possible for the investor to eliminate the influence of the interest rate on the nominal value of the investment. This is an important consideration to individuals and institutions with obligations which must be met at a moments notice and who may at any time be called upon to sell securities. Whatever the virtues of stock may be, it can not always be sold without sacrifice. The opportunities to sell without loss are much more limited than in the case of bonds. The interest rate, therefore, effects the values of stocks entirely apart from any policy of cumulative surplus and possibly apart even from changes in the level of prices. We have experienced a steady rise of stock prices since 1921, although we have enjoyed an exceptionally stable level of general prices during the greater part of that period. Some of the increase may properly be attributed to a decline in the interest rate, although this is most emphatically not the case during the past year.

When changes in the value of the monetary unit disturb the balance between costs and receipts, the value of stocks is affected even in the case of enterprises whose assets are chiefly of the Natural and Intangible types. If some of the costs of the manufacturer lag behind the general movement, his profit margin expands and greater earnings are the rule until these tardy costs catch up. On the other hand, the price of the service or product may lag while costs move up, in which case the effect will be just the opposite. The price of gold in a gold-standard country is always the same. Rising prices causing increasing costs spell hardship for the gold mines. The reluctance of consumers to pay higher prices for the services provided by railways places the latter in the same position, as witness the difficulties of the transit companies in New York City. The general thesis that stocks benefit during a period of rising prices and suffer on the other slope of the price peak must be modified. Like most generalizations in economics it must sustain many exceptions, so many, in fact, that there is grave danger of emasculating it as a valid investment principle.

We may summarize the influence of changing price levels upon stock values as follows:

1. If the assets of a given enterprise are predominantly Artificial and reflect changes in the general level of prices we may expect a sympathetic response in the market value of the stock.
2. If price changes stimulate or retard business by altering operating ratios, we may expect the stock market to register the fact in quotations.



NOTE: Data derived from Standard Corporation Records. The curve is based upon the sum of the median price of five representative shares of stock. The solid horizontal lines pass through periods during which liquidation with profit is possible. The broken horizontal lines pass through periods when liquidation involves loss.

3. In so far as price changes affect the interest rate, they will result in a recapitalization of income and a new capital value.

It should be noted that these factors do not all move in the same direction. While rising prices, operating through the first two channels, tend to raise the value of the common stock, they will, in so far as they raise the community interest rate and thus operate though the third channel, tend to lower that value. To illustrate: if the first two price influences result in an increase in the dividend rate from $6 to $9 and the third price influence causes the rate of interest to move from 6% to 9%, then the tendency of the former to increase the value of stock will be exactly offset by the pressure of the latter in the opposite direction. It should be said here that the bond displays no such elastic qualities of adjustment, and losses or gains due to changing interest rates are mitigated only by the proximity of the maturity date. The common stockholder has a twofold advantage here. His income adjusts itself, in this hypothetical case at least, to a decline in the value of the monetary unit while his capital remains unimpaired at least nominally. In both respects he is better off than the bondholder.

III

AS FAR as the reaction to price changes is concerned, we must concede that stocks are the superior investment medium. In a period of hyperinflation, a diversified holding of stocks may prove to be the anchor which will prevent fortunes from being swept away in a monetary debacle. Does this signify that we should accept the thesis of Edgar Lawrence Smith and Kenneth Van Strum, that is, that stocks are at all times the safer form of investment? To reply in the affirmative would be to ignore certain attributes of safety which it were folly for the investor to forget. He should be concerned not only with the ultimate safety of his investment but with two other aspects of security of paramount importance.

The first of these considerations is the investor's ability to liquidate on short notice at any time after he has made his investment. It is unnecessary to assert that stocks always have a market and that their liquidity is, therefore, beyond reproach. This is an inadequate defense, since any standard commodity which has value may be disposed of at any time—at a price. That states the difficulty. How often can the stockholder take his investment and convert it into cash without sustaining a loss? To prove that no loss occurs if the stock is kept a quarter of a century is beside the point. How does the investor know that he can keep it that long? At any moment and for a thousand different reasons it may be necessary for him to enter the market to place and sell his securities. The ability to liquidate is of supreme moment. Common stock-market values are notoriously volatile and, unless the investor has the resources which will enable him to await an opportune moment, he may be compelled to take a substantial loss. It is true that bond prices also fluctuate, but due to the fact that they have both a definite maturity date and a redemption price, their fluctuation is comparatively restricted.

The second point relates to the constancy of income from stock investment as compared to income from bonds. This is an element of investment security which must be considered no less than the ultimate

(*Continued on page* 18)

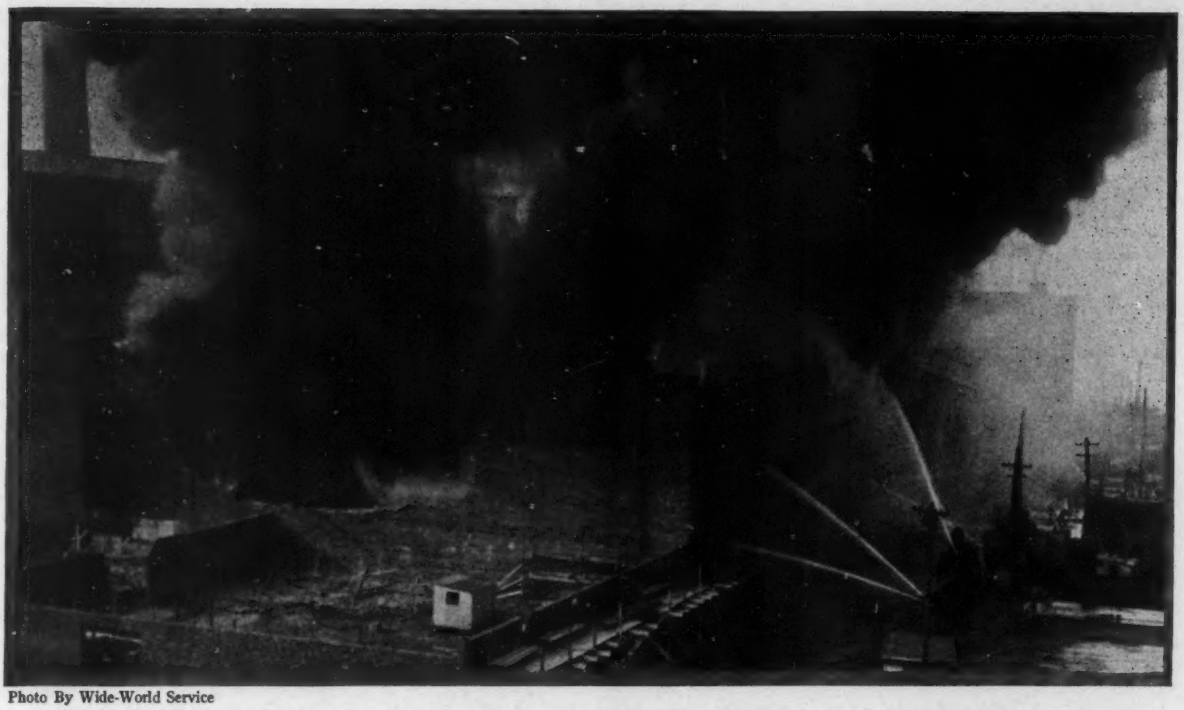


Photo By Wide-World Service

Merchandise Destroyed, Business Lost, Men Thrown Out of Work, Lives Endangered—All Are the Natural Result of a Factory Fire

Fire Hazards of Factories

What Is Being Done and What Should Yet Be Done to Decrease Losses In Manufacturing Plants Where Special Problems Exist

By JOHN H. JACKSON

ONE of the most serious problems confronting American manufacturers today is the fire hazard. Renowned throughout the world for their efficiency, they are still inefficient in the art of fire control. Every year, they feed millions of dollars in stock and equipment to the hungry red flames which lick through their modern factory buildings. And while these millions are being wasted in the annual factory bonfire, high salaried efficiency engineers are busy devising new tricks to cut costs and to speed up production.

Not all of the millions, which manufacturers check off as fire losses, could be saved. The very nature of some of our industries, the materials and the tools required for their various processes precludes any expectation that the fire hazard can be eliminated. But it can be decreased. Fire retarded buildings, adequate fire fighting systems, and less flagrant violation of common sense, especially in the more hazardous industries would cut by more than half the number of lives and the amount of property which are annually sacrificed on an altar of fire.

Strict building codes and frequent inspections, both by municipal authorities and insurance companies have been of increasing assistance, in recent years, to manufacturers anxious to cut their fire losses. Yet there is still much to be learned, and still much to do.

For a fire in a factory is of far greater import, to the community in which the factory is located, and to countless other communities and individuals throughout the country, than might seem apparent on the surface. Leaving out of the consideration the danger to the life of the worker, there is also the danger of widespread unemployment, because of the crippling of an industrial unit. Factories which have been gutted by flames cannot produce their quota, and other factories dependent on them, find themselves without sufficient materials with which to proceed with their own operations. Before the factory can be rebuilt, and can again produce, valuable orders and profits have been lost. Insurance may repay manufacturers for the loss of their buildings, but the loss of profits is paid largely by the buying public.

YET a study of some of the worst conflagrations in factories during the last five years shows that they could have been prevented, or easily controlled, *if they had been fought in time;* and a study of some of the smaller blazes which caused damage of less than $500 shows that these *might have* quickly developed into such furious and dangerous fires that total destruction would have resulted.

The Fall River conflagration, which started in an abandoned building of the Pocasset Manufacturing Company, and spread so far, and so dangerously that at one time the entire business district of the city seemed threatened, was caused, according to an inquest by a deputy state fire marshal, by a small fire which had been carelessly left by workmen.

The building had been unoccupied for some time, and the work of razing this structure, and others of the group, had already been started. But workmen who were removing machinery felt cold on February 2, 1928, and built a fire in an iron barrel.

When they quit work that night, they either forgot to put out the fire, or they failed to see that all embers were dead. Soon the wooden floor on which the barrel stood was a mass of flames, and within forty-eight hours, not only the Pocasset Mill had been razed, but the flames had wiped out six city blocks, including five banks, three hotels, two theatres, a temple, stores and office buildings. No lives were lost, but the property loss, and the shock to industry were so great that it will take many years before complete replacement and readjustment can be made.

The mill building in which the blaze started provided an ideal setting for a fire. Because the buildings were untenanted, no regular patrol was kept by watchmen. There was no neighboring city of Boston. A 100 HP motor which had been left running when the plant closed for the day, started a fire, presumably because of a hot bearing. The blaze spread to the roof overhead, but two sprinklers opened and practically extinguished the blaze. Fire fighters, called by the ringing of the sprinkler alarm gong entirely put out the fire by the use of a few chemicals. The entire loss was about $400.

But it is the large, rather than the small fires which are studied, investigated and used as examples. Small blazes which cause little damage pass virtually unnoticed. The only pleasant aspect of such a fire as the one that scared Fall River is that other communities, having had actual proof of the danger which they themselves

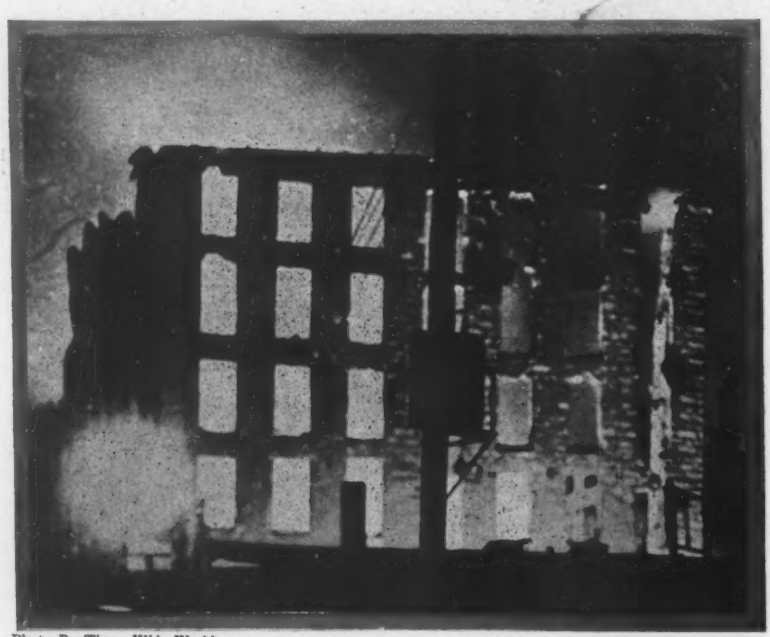


Photo By Times Wide World

If It Were Not for Insurance Could Industry Survive?

sprinkler system, and the oil soaked floors, well seasoned after fifty years of service, and perforated with many small holes for looms, not only made good tinder, but actually encouraged the flames to spread rapidly from floor to floor. Firefighting units from every nearby city and town came to the assistance of Fall River and only through the firemen's efforts, and the adequate sprinkler systems and fire walls of several buildings in the district, was a far greater section saved from total destruction.

CONSIDER the difference between the Fall River disaster and the fire which occurred a few years earlier in the New England Spun Silk corporation, located in the have allowed to threaten them, make some efforts to reduce the hazards.

In Fall River, the fire spread quickly from building to building. Only when it came up against fire retarded walls, buildings with sprinkler system, and wired glass windows, was it checked. If all of the buildings had been adequately prepared against the fire danger, the loss in Fall River would have been negligible. But the old proverb still holds: no chain is stronger than its weakest link.

That is the reason why the greatest care should be taken by manufacturers in the selection of a site for their plant. Modern efficiency methods require that a careful study be made before a new factory site is selected. Labor supply, power supply, transportation, accessibility to the source of raw material are all considered. But few such studies include mention of the desirability of neighboring plants. Whether or not adjoining factories will make safe neighbors is too frequently overlooked. Yet even the most modern factory building will be subject to losses if it is in close proximity to another factory which is inadequately protected. For even though the flames themselves do not penetrate into the fire retarded building, the opening of sprinklers, and the disruption of the work program will necessarily cause loss. The manufacturer who choses his business neighbors as carefully as he does his residential ones is taking a long step towards safety and increased profit.

But whether exposed to possible fire from adjacent buildings or not, there are definite structural details which should be included in every factory to provide the greatest possible protection against fire. Merely building the factory of fire retarded materials is not sufficient. Even though the skeleton of the building does not burn, the interior may be gutted.

ONE important detail for the increase of safety, is the elimination of combustible frames or trim about the windows. Past experience has proved that flames getting their foothold in the window trim, easily melt ordinary glass, and then find their way quickly into the building. Metal frames, fitted with sashes of wired glass will withstand high heat without buckling or releasing the glass, and will keep the flames out.

Factories built of reinforced concrete are often preferred to the "mill construction" type. In the concrete building, every floor (providing there are no vertical openings through it) is a fire wall, and a fire occurring on any one floor can be easily confined to the floor on which it started. Besides, by grading the floor towards drains leading to the outside walls, the possible damage from water will be greatly minimized. Any vertical openings required for factory operations should be in fire-proof enclosures, and openings to each floor should be protected either by fire doors, or shutters.

Many manufacturers prefer the "mill type" construction, because it is far simpler to attach pulleys, overhead rails, and other machinery to the wood than to the concrete. This slow burning type of construction, if adequately protected by sprinklers and otherwise protected, is not undesirable.

Photo By U & U

Where Explosion Is Combined With Fire the Wracking Forces of Destruction Reach Their Highest Peak

In planning for this type of construction, as well as for concrete buildings, it is to be recommended that floor areas be kept as small as is consistent with economical operation of the plant. By keeping the floor area small and separating the rooms from each other by fire doors, the danger of a fire which quickly gets beyond control is eliminated. And when the fire is confined within a relatively small area, materials, and work in other parts of the building are never disturbed. The fire hazard in old buildings as well as in new ones could be easily reduced by the division of large lofts and factory rooms by fire-proof walls.

But even easier than the erection of such walls, and as important in reducing the fire hazard, is good "housekeeping" in factories. Henry Ford is reported to have said that if he were ever asked to take charge of a factory, which was not showing a profit, that the first thing he would do would be to clean up the plant. When the manufacturer of the famous "flivver" made that statement, he was not thinking of the fire hazard, but of increasing efficiency. Yet his plan would be of equal importance to both.

A plant where nothing is kept in its place, where oil is allowed to drip onto the floor instead of being caught in a drip pan, where rags are thrown carelessly into corners, is very likely to be a source of worry to its owners because it is not making profits. It is also a source of worry to local firemen, because it represents a real fire hazard.

Educating employees to the importance of neatness and emphasizing the necessity for every day, rather than periodic "clean-ups" will do a great deal towards the prevention of serious factory fires.

IT IS interesting to note how often the elimination of the fire hazard also means an increase in efficiency of operation, and a corresponding increase in profits. The United States Department of Agriculture, for example, concluded, after a series of experiments, to determine the cause for the large number of cotton gin fires that static electricity, which was the greatest single cause of the fires, could be eliminated by wetting down the plant and grounds every day, or by injecting a little steam into the suction pipe in the direction of the flow of cotton. Not only did this dampening reduce the number of fires, but it also decreased waste of material. When cotton fibers are dry, a high percentage of waste occurs, for the fibres are easily pulverized and destroyed by the beaters. By injecting a little steam into the suction pipe, or by other dampening methods, the danger of fire was largely avoided, and the waste of materials decreased.

Similar results were obtained in the varnish rooms of automobile factories. For some time these factories had had a high fire average, and this not only interfered with the normal operation of the plant, but also caused great loss from property damage and interruption of work. A humidifying apparatus was installed, and it was found, that not only was the fire hazard materially reduced, but the work done in the factory was also improved.

Finding the cause of the fire, like finding the cause of anything else, is half the victory won. No enemy can be hard fought in the dark. Until you know the real source of trouble, it is practically impossible to gain control.

The difficulty of finding the real cause of fire, in an investigation conducted after the fire has burned itself out, should be recognized. Statistical records may point to the danger of matches, of lightning, of spontaneous combustion. But it must be remembered that the apparent causes are often not the actual ones. A match dropped in a corner near oily rags will disappear in the ensuing fire, which may be attributed to spontaneous combustion.

(Continued on page 29)

JOURNAL OF AMERICAN INSURANCE

JULY 1929

VOL. 6 No. 7

Published Monthly by the
American Mutual Alliance
180 N. Michigan Avenue
Chicago, Illinois
A. V. Gruhn, Editor and Business Mgr.

Judging the Goods by the Sales Method

THOSE of the older generation can recall the day when salesmanship was neither an art nor a science, but rather a method of beguilement, the chief aims of which were to avoid any discussion of the goods on their merits and to deprive the customer of whatever sense of discrimination he might possess.

The salesman's approach to his objective was circuitous and devious. It was marked by stages—effusive cordiality, dubiously funny stories, an invitation to lunch, to supper, to a show, cigars, more funny stories, flattery, potent beverages, more cigars, more potent beverages, order blank, pen, signature; wire to firm, "Josh Smith landed for 100 gross cork-tipped hairpins. Order in mail."

It was an expensive method, and Josh Smith presently realized that instead of being a highly esteemed customer, he was the deluded victim of the Cork-Tipped Hairpin company. He liked the cigars and the suppers and the shows. He liked the potent beverages. But pleasant as these things might be business was more important. He came to the conclusion that order blanks should be signed only in a state of sobriety. He reasoned that goods which had to be sold to him while he was mentally befuddled might be lacking in quality value, and probably could not be sold—more than once, anyway—to his own sober customers.

DIMINISHING returns taught the salesmen and their employers that the prospects were becoming wise, and there followed a change in methods. But long after liquor and like gross means for clouding judgment ceased to be a factor in successful salesmanship, the "bunk" method of persuasion persisted. "Bunk" is a euphony for misrepresentation. Advertising, whether spoken or written, continued to be replete with exaggeration, hyperbole, glamorous rhetoric. Goods were described in glittering generalities. Business followed the traditional appeal of the political stump-speaker, and treated its prospects as though they were devoid of intelligence.

But it developed that the prospect had more brains than the salesman supposed. He donned a mental gas-mask and pushed his way through the barrage of bunk to demand the facts about the goods. He insisted on comparisons, on tests, on proof of merit. Salesmanship again had to revise its methods, and there presently appeared upon its banners the noble slogan, "Truth in Advertising."

Gradually it has come about that sales appeal is based on facts and reason. Successful merchandising builds now on the hypothesis that the customer must be sold on merit. He is admitted to have intelligence, and the right to exercise it. The results of this change are wholly good. Salesmen become self-respecting and respected. Thought and effort and money, which once were directed toward overcoming sales-resistance by booze and bunk, now go to the producing of higher quality. The idea has started to penetrate even beyond the realm of material merchandising, and "blue sky" solicitations have begun to be sharply discounted in selling bonds, stocks and insurance.

IT IS gratifying to those who are engaged in the promotion of mutual insurance to realize that from the beginning it followed the methods of appeal which are today so widely approved. There was something inherent in the principle of mutual insurance that demanded straightforward presentation. Hence it has steadily won its way into popular confidence by an appeal, on the basis of demonstrable value, to the reasoned interests of those whom it seeks to serve.

It has never needed to conceal nor to exaggerate, because the simple facts have always told a favorable story, a persuasive story. Its promoters have courted inquiry. The more a prospect knew about its basic principle, its method of operation, its record of achievement the greater was the likelihood of his conversion from prospect to participator. The very idea of a mutual organization assumes common understanding and confidence. Upon no other foundation than that can such a system prosper—and that the mutual system has prospered is the outstanding fact of insurance history in the United States.

The Journal of American Insurance takes pride and pleasure in the character of the mutual insurance advertising which from month to month appears in its own pages, and in the pages of other publications. The sales method it represents is a high tribute to the value of the insurance protection it offers. We urge our readers to spend a little of their time in studying these advertisements as examples of straightforward and direct appeal. They stimulate faith in the character of the proposition which lies behind them. They have the strength of substance and the cogency of reason.

The worth of goods may be judged by the sales method. Consciously or unconsciously the great public today recognizes that fact. When it hears the ballyhoo it expects fake. It has coined its own words to express its contempt for meretricious and insincere appeal. It is "blah" and "hooey"—and the sounds of these syllables are self-defining. But the manifestly honest statement, the simple setting forth of fact, the reliance upon truth carry immediate conviction. Only propositions which will stand up under test can rest their case upon this basis.

Something for "The Wife"

A correspondent wants to know if we could publish something which might be used "to make the subject of insurance plain to the wife."

We are not sure that this task would be any harder than enlightening the average male mind as to hazards, coverages, rates, policies, co-insurance and the like; but we are contemplating a series of articles written from the feminine standpoint and hope to start publishing them soon. The prophecy is ventured that they will find a wide audience among the men also.

Life-Lights Against a Business Background

Independence

By S. J. DUNCAN-CLARK

MY LAWYER friend and I spent the week-end of the Fourth at a lake resort. We arrived on the morning of the glorious anniversary, and found that the natives and their holiday guests were in a state of much quiet excitement over the preparations for celebrating.

At the hotel there was a printed program of events—tennis and golf tournaments, swimming and diving contests, canoe races, motor boat races and a yacht race, with a monster bonfire scheduled for the evening. My friend of the bar called my attention to the fact that everything had been provided for but oratory. There was no speechmaking listed—not even the reading of the Declaration of Independence.

He was disposed to be critical of this omission; a little cynical, indeed. It was, he said, characteristic of the new spirit, the new attitude. The real significance of Independence Day was being forgotten by the people. Nobody seemed to care any longer. It had become nothing more than a holiday, a day for thrill and pleasure. He had launched on a speech himself—after the fashion of lawyers—and I had some trouble in halting him. I had to remind him that it was he who suggested this week-end escape from more serious things, and that if we had been hungry for Fourth of July eloquence we could have found it in the city. We had come here for rest and relaxation, and I, for one, was glad there were to be no speeches, I told him.

He looked at me with something of reproach in his eyes, but said no more.

WE LOAFED for a while, stretched on the sand and contemplating the beauty of the wooded dunes and tranquil blue water. Marshall—that was my friend's name—studied the program of events. It was a four-page leaflet printed in the naively ornate style of the small town print-shop. The names of the committee on arrangements appeared on the back page, and I noticed they seemed to interest him. Presently he suggested looking up the chairman and letting him know we were on hand.

"In the name of sense, what for?" I asked.

"Well," he said, "I thought perhaps they might want somebody to make a few remarks, and I feel in the mood. Maybe they left out the speaking because they have no speakers."

"Marshall," I exclaimed, "in all the years I have known you I have never before doubted your sanity, but that is the craziest notion I ever heard from the lips of anybody. Did you ever hear of an American community which lacked men who thought they could speak? I'll bet that committee has been dodging would-be orators from the minute it began to function. You'll have us run out of town if you don't suppress your inordinate vanity and this lust for utterance. I want to see the yacht race this afternoon. It's the only thing on the program which greatly interests me. If I can keep you from making a speech until then, maybe they'll let us stay." I spoke bitterly, and Marshall looked at me with pained surprise.

"All right," he said presently. "I'll keep quiet."

THE yacht race was timed for three o'clock. We watched the diving contest for an hour or so; ate an excellent dinner, and made our way easily to a headland overlooking the course on the lake. We had a mossy seat and the grateful shelter of spreading branches. It was as hot as July 4 usually is. There was a moderate breeze, however, which promised that the yacht race would be something better than a drifting match.

In my remote youth I had done a little sailing. Marshall was a landlubber. To him the word "boom" meant a bull movement in real estate, and a "tack" was something on which to avoid sitting.

There were three trimly rigged craft entered, their lines suggesting speed possibilities. As they came up to the starting buoy they broke into full sail, and went scudding ahead with a fine leeward slant. It was soon apparent, however, that one of the three had a master aboard who knew more than his rivals. The manner in which that boat took advantage of every slightest shift of the wind was a joy to see. The hand on the tiller was steady and certain, and the sheets were managed with a splendid precision and promptitude. Never a needless second was spent in luffing.

"Talk about independence," I cried, "there's independence for you. There's a better lesson in independence than all your orators can put into their eloquence.

"There's the independence of perfect control. Note, Marshall," said I, warming to my theme, "and you can use this illustration in your next speech, that craft is independent because she is managed by a mind that knows the rules of sailing, knows the laws which govern the action of the wind, knows them and uses them for progress by obeying them. Leave that craft to itself, and where would it be? Out of the running. Its independence is maintained by control, by intelligent understanding of the laws which affect its movement and its relation to the elements. That is the only real independence—the only independence that gets anywhere; that wins.

"THAT is what America needs—wise control, understanding management, a people who answer to the laws of progress and social welfare, of sound business and honest dealings. There is a lot of silly talk today about an independence that is no independence at all, but just an unguided, undisciplined drifting. If we listen to that kind of talk we are headed for—

"Say," interrupted Marshall, "who's the Fourth of July orator now? I thought you barred speeches."

I ignored his unwarranted remark.

"Look," I shouted, "look—Gosh, what a pretty finish!"

Red Hot

"Are you sure this coonskin coat will be warm?"

"Certainly. The coons that went into this coat died of suffocation."

* * *

Dumbest Yet

Hostess' Daughter (trying desperately to keep the conversation going)—"Did you ever hear the joke about the curio dealer who had two skulls of Columbus—one when he was a boy and the other when he was a man?"

Wiggins—"No, I don't think I have. What is it?"—*Kreolite News.*

* * *

How About the Tip?

Taxi Driver (giving traveller his change)—"Here's your receipt, sir."

Traveller—"Oh, did I buy the car?"

Hedging

(Continued from Page 12)

safety of the principal. Since the investment is the purchase of a series of future annuities, it is important that we know the approximate amount and certainty of these annual payments. The high-grade bond is here a source of great comfort to the investor. Common stock, on the other hand, registering the vicissitudes of the business cycle, is likely to *yield* an income which varies from feast to famine.

IV

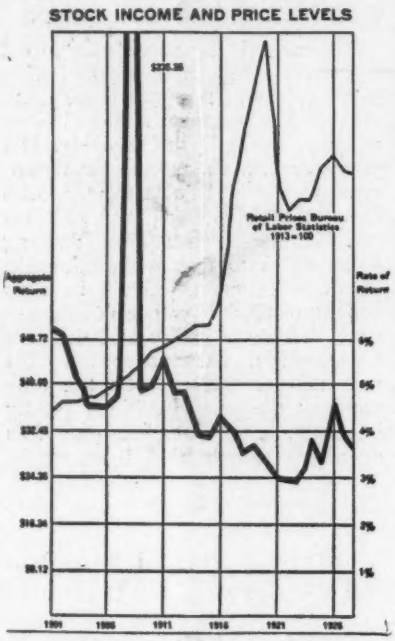
NOW these considerations are admittedly abstract, and the hard-headed investor would like to see them in practice. He has absorbed some of the current encomiums upon common stocks and, regarding the history of stock prices during the past seven years, has been profoundly impressed. However, it is doubtful if the optimist lives who will hold that the future will project indefinitely the phenomenal rise of the immediate past.

Let us retrace our steps, therefore, to the year 1901. We then had four years of recovery from a period of depression, and far-reaching changes in industrial organization were afoot. A tide of optimism swept the land, and as we step from the year of our Grace 1929 to that of 1901, we feel at home. Thoroughly persuaded of the investment integrity of the common stock, we sell our bonds and purchase five shares of common stock. Our selections are made only after a careful review of investment opportunities and are as follows:

Name	Purchase Price*	High for Year	Low
New York Central	157	174½	139⅜
Chicago & Northwestern	192	215	168½
American Tel. & Tel.	162	167¾	157½
American Sugar	128	153	103½
Adams Express	173	199	147
Total Investment	812		

* The purchase price in each case has been the median price for the year, i.e., a price half way between the high and low for the year. All data have been taken from Standard Corporation Records.

Chart I in the next column shows the course of investment values during the next 28 years. Should we be compelled to liquidate at any time during the next five years, i.e., up to and including 1906, and have average luck in striking the market, it will be possible for us to get out with a profit. Even in these years, however, it will be necessary for us to await our investment opportunities, for the fluctuations within each year are so great that any inability to defer liquidation may involve sacrifice. True, these stocks do not strike their low points at the same time, and if our requirements do not compel us to sell out entirely we may be able to protect ourselves by selling only those shares which have not suffered. After 1906 the situation is very depressing. We find it increasingly difficult to get out



NOTE: Heavy line represents sum of dividends of five representative shares of stock. It includes extra dividends and rights at median of quoted market prices.

without loss and, should we be so unfortunate as to be compelled to sell in 1921, we should realize only $356 on an original investment of $812. It must be remembered that we can not console ourselves with the reflection that our investment will fully recover its original nominal value by the end of 1928. We can now play various statistical tricks by using the index of prices (Dun's) and converting our equities into "purchasing power." The price received for these five shares at the median price for that year will buy as much as $201.92 would have bought in 1901. The real value of our investment has declined more than 75%. If we can keep the stocks until 1928 and sell them at the median price for that year we shall be able to realize $837, a nominal increase over the original amount. Upon conversion into purchasing power we find that this is the equivalent of $394.39 in 1901. This is not an impressive record and gives little support to the belief that common stocks will in the long run compensate changes in the purchasing power of the monetary unit. We can commence our experiment at subsequent intervals of five years and, barring only the first and last periods, we see that our opportunities of converting this investment into cash without loss are limited.

Taking the second of our two safety requirements in investment, namely, certainty and uniformity of income, we find the record equally unsatisfactory. Chart II portrays the dividend history of these five stocks. Instead of a positive correlation between combined dividends and the price level, we discover an inverse trend. The decline in the purchasing power of the dollar, instead of being compensated by an increase in dividends, is accentuated by a reduction of the total. Our extremes range from $235.25 in 1908 (due to an extra dividend in the form of $200 collateral trust bonds distributed by the Adams Express Company) to $23.50 in 1922.

EVEN if we increase the number of stocks purchased and distribute the risk over 10 or 15 issues instead of five, we need a species of investment clairvoyance to insure any degree of compensating changes in stock values to offset changes in price levels. The above stocks are not hand-picked with a view to proving any points made in this paper but were selected at random from a group of stocks which would have (in 1901) commended themselves to intelligent investment judgment.

If any hopes can be entertained for hedging in investment they must be directed not toward commitments which will compensate changes in the purchasing power of money but rather toward minimizing the risks of liquidation and insuring greater constancy of income. Any well-developed and soundly-conceived plan of investment should include high-grade bonds, the proportion depending upon the importance of these two factors in the income requirements of the individual or institution.

The Radio Bug

"Do you carry B-eliminators?"

"No, sir, but we have roach powder and some fly swatters."—*Life.*

* * *

Painless Collections

Client—"Where did you get this wonderful follow up system. Why, it would get money out of anybody."

Agent—"I simply compiled and adapted the letters my son sent me from college."

* * *

She—are you affiliated with any reform organization?

He—Yes, I'm married.

Photo By Foley, N. Y.

Even the Most Palatial Appearing Vacation Hotels May Be Filled With Fire Hazards to the Guests

Why Summer Resorts Burn

Suggesting To The Vacationist That Watching His Step In Choosing A Temporary Residence For Recreation Is Well Worth While

By J. PAUL ATWOOD

SAFEGUARDING of summer resorts against the fire hazard is not a seasonal problem. The hotels and cottages may be occupied only for a few months of the year; but tenanted or untenanted, they represent one of the greatest fire risks in the country.

For if any one class of buildings can be said to be built to burn, it is those which house vacationists. Every summer, and every winter, millions of dollars are lost in resort fires, for no better reasons than the extreme combustibility of the structures and the inadequacy of the fire fighting equipment. Almost without exception, the summer resorts of the United States are composed of poorly constructed wooden buildings, in such close proximity that a fire once gaining headway, threatens the entire colony. Construction that would not be countenanced for other buildings sheltering large groups of people, is still used for summer hotels.

And this is so, not because hotel proprietors fail to recognize the fire hazard, but largely because of the vacation habits of Americans. A resort which may be filled to overflowing one year, remains deserted the next, merely because another resort has become *the* place to go. Under such conditions, it is uneconomical to erect buildings for permanence. Instead, they are designed to meet the requirements of their heyday, during which time they must prove profitable investments, and then to slip into second, and even third raters.

The short period during which resort hotels and cottages are occupied, is another reason for the lack of forethought in their construction. To many people, summer quarters are merely glorified "camps" where they rough it without complaint. Inconveniences that they would not endure at home are welcomed as part of the summer fun. Therefore, summer hotel proprietors and even private families build light wooden structures around hotels, or other large central buildings, which themselves are ready prey of fire.

The average summer resort carries on a continual flirtation with fire. And although other summer flirtations are rarely serious, in intent, or result, the constant all year round flirting with fire on the part of resorts almost invariably ends disastrously. The resort may emerge successfully from a few years' flirtation but because it plays with fire out of season, as well as in season, it is bound to be eventually singed, if not completely burned.

THE excuse given for the cheap and hazardous construction of many summer resorts is that they are occupied only for a short period of the year. The fact that these buildings are, nevertheless, subjected all year round to the fire hazard, does not seem to be taken into consideration. As a mattere of fact, more resorts are destroyed by fire before, or after the season, than during the months that the buildings are in use. A report of hotel fires in 1923 and 1924, two typical years shows this conclusively.

Photo By P & A

Stark Ruin Can Easily Be the Aftermath of Failure to Recognize the Need of Fire Protection When Emergencies Arise

	1923 Number of Fires	1924 Number of Fires
January	17	23
February	23	12
March	22	3
April	14	10
May	13	14
June	15	8
July	8	5
August	10	12
September	8	11
October	19	17
November	12	28
December	17	37
	175	180

Although 175 fires were reported in 1923, with a loss of life of twenty-three, and 180 hotel fires were listed in 1924 with a mortality of five, by far the greatest percentage of such fires took place out of season. Figuring on a four months' season, which is somewhat longer than that of many resort hotels, it will be seen that only 41, or 23.5% of the fires of 1923, and only 30, or 20% of the 1924 fires, took place during the period when the hotel was occupied. The small proportion of fires occurring when the building was completely occupied is very likely the reason for the small loss of life.

The occupancy of the buildings is, however, one important reason why there may be fewer, or at any rate, less serious conflagrations in season, than out of season. For fires are more quickly discovered when the building is tenanted, and can be more expeditiously fought.

ON THE other hand, the guests and servants occupying resort buildings are responsible for many serious fires. Utter carelessness has caused many resort fires resulting in complete loss. A guest, sitting on the veranda of a large, old fashioned hotel, tossed his cigarette butt away without taking the trouble to notice where it fell. If he had watched, he would have seen it blown underneath the veranda, where some scraps of paper and dead leaves were soon fanned into a brisk fire. Fortunately, or unfortunately, all of the other guests were away on a boat ride, and no one saw the fire until the porch was aflame. Then cottagers, and guests from other hotels tried to control the fire, but this proved impossible. Soon the entire building was ablaze, and although no lives were lost, the guests lost all of their belongings, and all that remained of the hotel was the chimney, and some charred beams.

But despite the carelessness of the guests, they cause only a small percentage of the fires that destroy and mar so many of our summer resorts. A far greater number are caused by building defects, exposure, the absence of watchmen, and the inclusion, under the hotel roof of hazardous operations, incidental, and necessary to the management of a modern hotel.

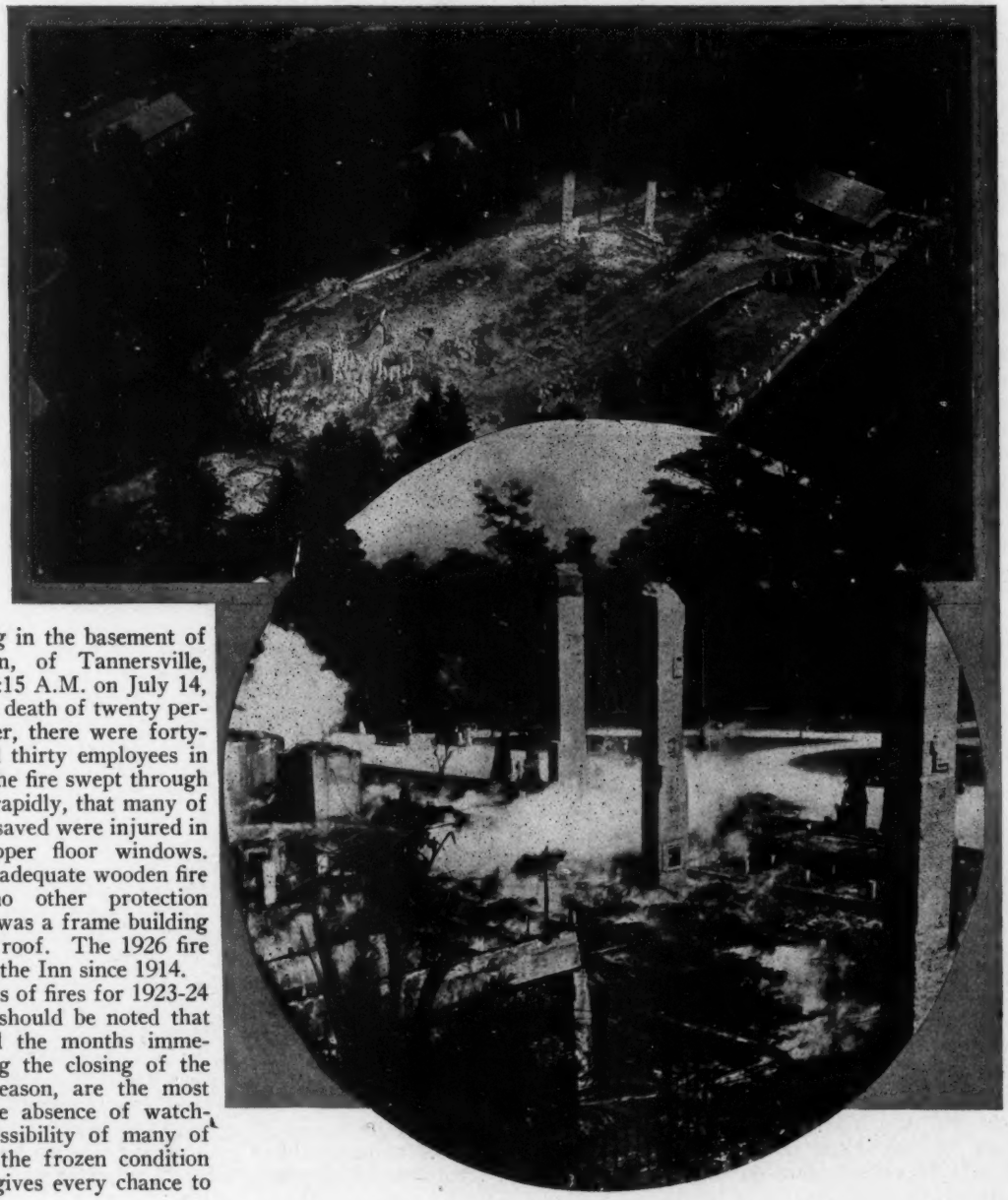
In a study of 79 fires in resort hotels, made by the National Fire Protection Association, it was found that of 51 fires for which the place of origin was given, only ten started in guest rooms. The majority of these fires were caused by careless smokers, while a few were attributed to the use of faulty electrical appliances. The causes of the remaining forty-one fires were listed as follows:

Matches—Smoking	15
Sparks on Roof	14
Heating	11
Defective Electric Wiring	7
Defective Chimneys	5
Electric Pressing Iron	2
Lightning	3
Miscellaneous	3
Total Known Causes	60
Unknown Cause	19

According to the statistics of the N. F. P. A., approximately the same number of fires occurred in the daytime, and at night. Of 70 fires for which the time of the day was reported, thirty-eight took place between 6 A.M.-6 P.M., and thirty-two between 6 P.M.-6 A.M. No significant inferences can be drawn from these figures, however, except perhaps, that the same hazards are present during night and day. In the majority of resort communities, the guests keep late hours, and the hotels

are brightly illuminated until early in the morning.

Because of this, and also because a little less than half of the fires took place during the night, the loss of life is comparatively low. During the day, the majority of the guests are either away from the hotel, or are gathered in the lounging rooms on the first floors. Escape from summer cottages is also easy. It is therefore only when fires break out after the hotels have closed for the night, and all the guests are asleep in their rooms, that a distressingly high mortality results.



Resorts in Inaccessible Places Such as on the Tops or Sides of Mountains, or in the Dense Woods have Little Chance to Escape Destruction Should Fire Break Out, Unless Equipment for Fighting Flames is Kept on the Premises.

Photos By P & A

FIRE, starting in the basement of Twilight Inn, of Tannersville, New York, at 1:15 A.M. on July 14, 1926, caused the death of twenty persons. Altogether, there were forty-eight guests and thirty employees in the building. The fire swept through the building so rapidly, that many of those who were saved were injured in jumps from upper floor windows. The hotel had inadequate wooden fire escapes, but no other protection against fire. It was a frame building with a shingled roof. The 1926 fire was the third in the Inn since 1914.

In the statistics of fires for 1923-24 given above, it should be noted that mid-winter, and the months immediately following the closing of the hotel for the season, are the most hazardous. The absence of watchmen, the inaccessibility of many of the hotels, and the frozen condition of water pipes gives every chance to the fire, and none to the fire fighters during the months of December, January and February. In 1923, 57 fires took place during the mid-winter months, and in 1924 there were 72 fires. The majority of these fires occurred in buildings which were untenanted, and unpatrolled.

Fires that occur in the autumn, on the other hand, are too often caused by employees cleaning up preparatory to locking the building for the winter. The Hotel Kasterskill, at Haines Falls, New York, which was destroyed by fire on September 9, 1924, with a loss of $300,000 was burned when there were only six employees left in the building. The last of the guests had left several days previously, and according to the report, the fire started in the kitchen, where grease, accumulated from the season, was being made into soap. The grease caught fire, the flames spread rapidly, and although the hotel had recently been equipped with fire extinguishers, the employees were either too frightened, or unable to use them. Before the fire companies from Haines Falls had climbed the mountain to the hotel, the entire building was a mass of flames, and within a few hours, it was a total loss.

The Kasterskill fire is typical of many others which have destroyed

hotels during the "closed season." The work done by the last employees left in a hotel is often highly hazardous, and besides, the strict routine of the summer being passed, it is quite natural that they should occasionally take the chance which may result in a serious conflagration. The layman, hearing of such autumn fires, usually feels that it is better that they should have occurred when there was little danger of loss of life, than during the summer season. Firemen, and fire engineers could tell him that a large percentage of such fires are entirely preventable, as preventable, in fact, as those which occur when the hotel is being made ready for occupancy in the spring.

On June 13, 1928 (a day of evil omen for the superstitious), a four-story frame summer hotel was being renovated for the regular season. Painters, plumbers, electricians and other mechanics were completing their work in the building. But they never finally completed it. For a fire, which started at one o'clock on the morning of the thirteenth destroyed the entire building at a loss estimated at $100,000. By hard work, the firemen managed to save the summer cottages surrounding the hotel.

A little less than a month ago, another hotel was being renovated prior to being opened for the season, when a fire put an end to the hotel building, not only for this season, but for all others. Fire, starting from a chimney spark on the roof of the New Shaw House of Little Nahant, Massachusetts, soon gained such headway that the entire building disappeared in a huge bonfire. The proprietor at first tried to fight the blaze with a garden hose, and when the firemen arrived, they were unable to draw high pressure water for more than an hour.

MANY of the most serious conflagrations in summer resorts have started in the roofs of hotels and cottages. Whipped into vigor by high winds, and fed by construction which had been drying in the sun for many years, the roof fires are a serious menace to summer resorts. Not infrequently, entire sections of the colony are wiped out within a few hours. And still resort cottages and hotels continue to use shingles, which have been treated in no way to make them fire retarding.

Frequently, fires which start in the attic, or on one of the upper floors, lick their way up to the roof, and there find sufficient tinder to give them a real head start on the fire fighter. A fire started in one of the upper floor rooms of the Profile House, one of the show places of the White Mountains, on the morning of August 2, 1924. Soon the flames had eaten their way to the roof, and both because the light joist construction of the building made fine tinder, and the inadequate supply of water and equipment hampered the fire fighters, the hotel building, and several adjacent structures were burnt to the ground. The loss of the hotel building alone was estimated at $325,000, and three hundred guests lost all of their personal effects.

Fourth Annual Accounting Conference

National Association
of
Mutual Casualty Companies
and
National Association of Automotive Mutual Insurance Companies
at
HOTEL STATLER
Buffalo, S. Y.
October 24-25-26, 1929

Resort hotels, and the light surrounding cottages, do not have an even fighting chance against a fire, unless the flames are quickly fought. Almost every summer colony is a perfect setting for a disastrous conflagration. It is interesting to note how many fires, in season and out of season, starting in a small way, in one building, quickly develop into such uncontrollable blazes that thirty, and even more structures are razed. A fire broke out under a store near the boardwalk of Ocean City, New Jersey, on October 12, 1927, and a strong ocean breeze carried the fire through four city blocks. Fire retarding shingles on several buildings greatly aided the firemen in controlling the conflagration. But before the flames were finally extinguished, thirty buildings had been destroyed, and the loss was estimated at $1,250,000.

A large majority of the resort communities have inadequate fire fighting units, and must depend chiefly on volunteer, and inexperienced firemen. Too often these men are hindered by poor water prssure, and other similar handicaps which might have easily been eliminated if anyone had thought about them in time. Hotels which are located atop mountains, or in other spots which are chosen for their beauty rather than for their accessibility, should be doubly careful that adequate fire fighting equipment has been installed. Unfortunately the record of resort fires shows that preparedness for fire emergencies has not become general. Although there is constant danger of fire in the wooden resort buildings, there is no thought given to a fire until it actually starts. Then there is dismay because weak streams of water have no effect upon the blaze.

There was no good reason, for example, why the Gedney Farms Hotel of White Plains, New York, should have been a total loss. The fire was discovered shortly after it started in one of the guest rooms, and for several hours, it was fought and believed to be under control. After the fire had been burning for three hours, the guests waiting downstairs were notified that "everything would be all right." But by the next morning, the entire building was in ruins. The fire chief blamed the victory of the flames to the lack of water. Although he had more men, and more equipment than he could use, he had only two weak streams of water to play on the flames.

FROM the record of resort fires, it likewise seems apparent that hotels and cottages instead of depending upon municipal fire fighting equipment, must protect themselves against the fire hazard. And in those colonies where the cottages are clustered around a hotel, or other central buildings, that the largests structure, which houses kitchen, boiler room and laundry, must take extra precautions. Proper automatic fire doors, and sprinkler systems, especially in the working portions of the building, would undoubtedly reduce the fire hazard by more than half. None of the 79 resort hotels studied by the N. F. P. A. were equipped with sprinkler systems. This situation is typical of many large and small resorts throughout the country.

Yet spinklers are annually saving scores of lives, and millions of dollars in property, for other resorts. Buildings which would otherwise be firetraps, frame structures with shingled roofs, are being made safe for vacationists by the installation of sprinklers. Some of the hotels are entirely sprinklered, others only so equipped in the working parts of the

(*Continued on page 30*)

Fire Resistant Dwelling Construction

Study of The Relations of Materials, and their Arrangement, to the Prevention of Flames and Checking their Spread

By Dr. S. H. INGBERG
of The U. S. Bureau of Standards

Embodying Excerpts from Dr. Ingberg's Address Before the Washington Convention of Mutual Insurance Companies.

OUR country suffers a fire loss on dwellings and their contents of approximately $160,000,000 per year, a figure that is based in part on estimates, particularly as it concerns the rural loss, and is subject to an uncertainty of some 20 per cent of the total. The property loss on dwellings and their contents thus represents about 30 per cent of the total property loss from fire, the latter being now near $560,000,000 per year. This total loss, while constituting a very large drain on the nation's resources and increasing during the past five years by about 2½ per cent per year, has apparently not kept pace with the increase in property values subject to fire loss. The loss on dwellings has, however, increased at a greater rate than the general loss. The average percentage increase of this item for the five years, 1919-1923, was over 1½ times the percentage increase of the loss on other property, the difference being particularly marked for the last two years of the period. While new dwelling construction increased during this period in greater volume proportionately than buildings of other types, this apparently does not account for the difference in fire-loss trend indicated above.

Proximity of a Large Building Nearly a Small Home is a Menace to be Reckoned With

Reduction in losses in the larger buildings can be attributed in part to the cumulative effect of the use of fire resistive building construction in the industrial and high-value districts of our cities, which has greatly reduced the fire hazard to individual buildings as well as the general community hazard. While fires can originate in fire-resistive buildings and occasionally cause large losses, the confining effect of the building on the spread of fire within and without and the greater ease of extinguishment afforded by a structure that does not collapse in any part under fire attack, has tended to reduce the loss per fire and the number of losses from large fires and conflagrations. As far as it concerns dwellings, city regulations and the trend in construction have been directed mainly toward securing a more fire-resisting exterior as a safeguard against spreading fires. Exposure fires are, however, not accountable for a large enough proportion of the fire loss to make such improvements as have been effected in the protection against them immediately noticeable in the loss total for the class. It might also be noted that due to the shortage in housing after the close of the war, low material stocks and high construction costs, the general character of the housing provided was probably below that of the pre-war period as it concerns spacing of houses and other matters that decrease the fire hazard.

Fire Causes

AS AN aid in determining the relative importance from the standpoint of fire resistance of the various details that go into dwelling construction, a review of the main causes of fire in dwellings is pertinent. In Table 1 are given the percentages of the total loss incurred from two classes of risks as reported by the Actuarial Bureau of the National Board of Fire Underwriters for insurance claims paid for losses incurred during the 5-year period, 1919 to 1923. The first column of percentages refers to losses incurred on dwellings in cities, towns and suburban areas, not including farms. The second column refers to farm losses as a whole, of which farm dwellings would constitute nearly two-thirds of the total, as judged by the character of the predominating causes.

The first five items in the table relate to house heating and comprise 31.24 and 27.38 per cent of the total for the urban and farm loss, respectively. The next five items (Nos. 6 to 10) referring mainly to lighting, cooking and other household operations, total 13.26 per cent of the urban dwelling loss and 5.88 per cent of the farm loss, the difference being prob-

ably due to the more limited use of electricity and gas for household purposes on the farm and the fact that fires caused by wood and coal-fired stoves of all kinds are included under Item 3.

Matches-smoking are responsible for about an equal percentage loss in the two columns and the miscellaneous causes 12 to 18 total a little higher for the farm loss. As would be expected, spontaneous combustion and lightning cause much higher losses on the farm than on urban dwellings. Most of the loss on the farm from spontaneous combustion is presumably on hay and grain, and would thus not enter into the dwelling loss. The loss from exposure is much larger for the urban areas, communicating fires with farm buildings being limited to those within a group or as caused by grass, brush and forest fires. On the whole, the table of causes appears to reflect faithfully the difference between urban and rural districts in conditions that affect the fire loss.

Table 1—Causes of Dwelling and Farm Fire Losses

Item No.	Causes	Per Cent of Total Loss Dwellings (chiefly urban)	Farm Loss (including farm dwellings)
1.	Defective chimneys and flues	11.46	13.42
2.	Sparks on roof	9.74	8.10
3.	Stoves, furnaces, boilers and their pipes	7.56	4.24
4.	Hot ashes, coals, open fires	2.43	1.60
5.	Steam and hot water pipes	.05	.02
6.	Gas, natural and artificial	1.33	.15
7.	Open lights	1.74	.33
8.	Electricity	4.80	.81
9.	Petroleum and its products	5.10	4.43
10.	Ignition of hot grease, tar, wax, asphalt, etc.	.29	.16
11.	Matches—smoking	5.94	6.03
12.	Rubbish and litter	.30	.07
13.	Explosives	.20	.41
14.	Sparks from machinery	.03	.46
15.	Sparks from combustion	.51	.92
16.	Fireworks, firecrackers, etc.	.27	.05
17.	Incendiarism	.48	.56
18.	Miscellaneous known causes	.65	.98
19.	Spontaneous combustion	1.39	5.05
20.	Lightning	1.95	14.43
21.	Exposure, including conflagrations	12.56	2.70
22.	Unknown causes	31.22	35.08
		100.00	100.00

Exterior Structural Elements

THE roof and outside walls or finish of a house are required to resist brands and other modes of fire attack from the outside, and in built-up localities it is desirable that they confine a fire within the buildings to such extent that a complete burning-out will not be unduly hazardous to nearby buildings. Almost all of the incombustible types of roofing, such as slate, clay and concrete tile, cement-asbestos, metal sheets and metal shingles have sufficient fire resistance to prevent ignition of the boards supporting them from chimney brands or brands from an adjacent burning building. The protection afforded by the metal roofings can be increased by placing asbestos felt between the roofings and the boards. Prepared asphalt-saturated rag-felt roofings afford fair resistance against brands, the effectiveness depending mainly on the thickness of the roofing and the amount of mineral surfacing present. Wood shingles are less resistive to brands after a period of weathering than when new. Well maintained paint coatings help to preserve the shingle and increase brand resistance. The best method of painting consists in dipping the whole shingle in paint and giving the exposed butts a second coat on the roof, with repainting sufficiently often to maintain the paint film on the exposed parts of the shingle. In staining shingles, the amount of pigment deposited is insufficient to introduce any appreciable fire retardant effect, and until the flammable liquid carrying the pigment has entirely evaporated, such shingles are more readily ignited than unstained shingles.

IN COVERINGS for outside walls, we have a range in fire resistance beginning with board finish, followed in order by stucco on wood lath, on metal lath (both over wood framing and boards), masonry veneer over wood frame, and load-bearing masonry walls. As in the case of shingles, well maintained paint coatings will slightly increase the fire resistance of a board finish against an exterior exposure fire. The thickness of the paint film is, however, only a few thousandths of an inch and no matter what kind of paint is used, it can give only the most temporary protection. Stucco and plaster have, on the other hand, thicknesses from ¼ inch to one inch and can protect the boards or frame on which they are applied from 5 to 30 minutes as subjected to the regular fire test, depending on the kind and thickness of stucco or plaster and the lath on which they are applied. Four inches of brick or other masonry veneer will give protection for wood framing for one hour of the standard fire test, which is sufficient protection against severe exterior exposures. In case of interior fires, however, most of the facing is likely to collapse when the interior framing burns out, and hence adjacent buildings will be more severely exposed than where load bearing masonry walls are present. The latter, if 8 inches or more in thickness, will generally give adequate protection against outside fires in residential districts. In the thicknesses used, masonry walls of 3-story and higher buildings will be unstable after interior combustible framing burns, and collapse of portions of them may occur. The stability depends on the thickness, unsupported height and length and on the number and size of openings. The stability of 2-story walls is generally greater than for higher buildings although full freedom from collapse during fire cannot be promised with combustible interior construction. Where the interior construction has sufficient fire resistance to withstand a complete burning out of building contents without collapse of floors, roof, columns or partitions, the walls will remain supported laterally at the floor and roof lines and the unstable condition incident with burning out of buildings with combustible interiors is avoided. Such buildings constitute only a minor fire hazard to adjacent buildings, even where both the burning and exposed building have unprotected window and door openings. The fire volume is confined by the fire resistive floors and roof so that no large free sweep of flame and highly heated gases can arise, and the closure afforded by walls and roof prevents brands in appreciable volume or size from being given off.

Protection of Openings

WHILE window and door openings of dwellings are not often protected with metal frames, sash, wired glass or metal shutters, such protection where the exterior exposure is severe is without doubt justified. The ordinary wood frames, doors, sash and plain glass give very minor protection. Even where these are used it is desirable to incorporate the full protection required by the location into the wall construction, since the openings generally constitute no large part of the total area exposed and the wall affords a shield behind which fire attempting to enter at the openings can be fought.

Cornice and Eave Construction

ASSUMING roof, wall and opening protection sufficient for the location, the fire can enter through

wooden cornices and communicate with the hollow spaces in interior floor and roof construction. In one style of architecture, exposed wood at these points is eliminated by cutting off all roof projections outside of the wall lines extending the protective roof covering to connect with the outside of the wall or wall covering at the ends of the roof, and constructing a low parapet of incombustible materials above the roof line at the eaves, the lower part of the roof and parapet surface being suitably modified to carry the run-off from the roof. With a projecting roof a measure of protection against exterior fires can be obtained by fire-stopping the hollow spaces in the roof construction above the wall lines by methods outlined later.

Interior Construction and Protection

SINCE the greater number of fires originate within buildings, emphasis should be given to the importance of interior structural provisions that will aid in preventing origin and spread. Interior fire origins range from sparks and match flames to rapid burning of quantities of flammable liquids. Even admitting that given protections will be inadequate for severe fire conditions, it is advantageous to apply them if they are the best that can be obtained under the conditions present.

The basement, if housing the heating plant and fuel and other storage, gives rise to many fires and a smoke-tight and fire-resistive separation from the upper stories is desirable. Plaster board, asbestos board and plaster on metal or wire lath, applied on the basement joists afford a range in effectiveness. A double first floor with incombustible felt between the two board layers adds appreciably to fire resistance and smoke-tightness. Protecting the floor members for a space of several feet above and around the furnace will help to prevent fires resulting from overheating and defective or fallen smoke pipes. Complete fire separation by means of a fire-resistive and incombustible first-floor construction is advantageous even where the rest of the house is of ordinary construction.

Where the space under the first floor is unexcavated and unused, no fire hazard from it is present if it is enclosed and openings well screened.

The interior partitions, floor and roof constructions determine the main fire-resistive characteristics of the building. The wall, ceiling and floor finish is the first to receive the attack of fire from interior origins. Wood and combustible fiber board finishes can be made a little less flammable by application of paint, whitewash or calcimine. Well applied whitewash coatings are as effective as any ordinary or fire-retardant paint. Plaster boards, plaster on wood lath, plaster on plaster board, and plaster on metal or wire lath give greater protection, the effectiveness being approximately in the order given. For interior work, gypsum plaster has been found to be very effective, as it is not likely to fall off during the fire exposure and high temperatures do not penetrate it rapidly. Where walls and ceilings are protected against moderate fire attack, the fire may burn through the wood floors almost universally used with wood framing and spread into the hollow spaces back of the finish, particularly where no fire-stopping is present.

FULLY fire-resistive interior construction for dwellings can now be obtained in a number of forms, including for floors several forms of light steel protected framing, hollow clay or gypsum tile between reinforced-concrete ribs, or protected steel beams, and reinforced concrete slabs and beams.

Non-bearing partitions can be of steel studs covered with plaster on plaster board or on metal or wire lath, of hollow clay tile or gypsum or concrete blocks. Load-bearing partitions can be of heavy steel studs protected by plaster on metal or wire lath or of suitable thicknesses of hollow clay tile, concrete block, poured concrete or brick. While cement or similar incombustible floor finishes are preferable from the fire-resistance standpoint, a hardwood top floor on an incombustible base is not very con-

Fire Retarding Construction Could Have Done Much to Prevent the Spread of Flames Such As Are Seen Here

Building Construction

(Continued from Page 25)

ducive to fire origin or spread. Coatings of mastics and linoleums can also be applied on incombustible bases without serious impairment of the general fire resistance of the construction.

The roof framing with steep pitch is less adapted for full-resistive construction than that for walls and floors, although several forms of roof constructions for industrial buildings could probably be used in dwelling construction. A wood-framed roof construction protected with a fire-resistive roof covering on top and with one of the more effective types of interior finishes beneath, would fail only under severe fire attack from within or without. Fires originating in the attic or roof are seldom hazardous to life and where the rest of the building construction, including the attic floor, is of fire-resistive types, downward spread of fire can be checked with little difficulty.

Fire-Stopping

WHERE the framing involves hollow spaces with combustible framing members or finishes, the spread of fire can be retarded by closure of the hollow spaces at the floor, wall or roof lines. Well fitted board or plank stops can serve as temporary checks, but somewhat better results can be obtained with incombustible materials fully filling the spaces in walls and partitions opposite hollow spaces in floors and for 4 inches or more above them. Board stops at the mid-height of walls and partitions are also desirable. With outside masonry walls without hollow furring spaces, fire stopping need be applied only at intersections of hollow interior partitions with floor and roof constructions and at the exterior roof lines. Of incombustible materials suitable for fire-stopping can be named cinders, ashes, refuse mortar, plaster, concrete, hollow tile, brick, gypsum block and mineral wool. The coarser material would have to be mixed with fine material or mortar to prevent large voids. The fire-stopping can be supported on horizontal wood strips not less than 2 inches thick beneath the filling and by one inch boards opposite the hollow floor spaces. Metal or wire mesh has also been used for these purposes. Generally, considerable care and expense are required to obtain a good job of fire-stopping.

Chimney Construction

ONLY a few of the more important details of chimney construction that have a bearing on fire hazard will be discussed. A single thickness of brick on edge gives a chimney wall too thin to afford the necessary heat insulation and openings in the mortar joints are almost certain to be present with such narrow beds and edges. With 4-inch bricks laid flatwise a fair degree of insulation is provided, particularly if full horizontal and vertical mortar joints could be obtained. This, however, is seldom the case and some form of flue lining inside of the brickwork is desirable where the latter is not more than 4 inches in thickness. Much has been said pro and con in the matter of flue linings. Undoubtedly many of them crack near the smoke inlets and also at other points if the chimney soot burns out. However, if the space between the lining and the brickwork is filled with portland cement or cement-lime mortar for the full length of the chimney the lining will be likely to remain in place even if cracked and to function almost as well as if it were intact. Chimneys should be laid up in 1:3 portland cement or 1:1:4 portland cement-lime mortar, the proportions referring to volume parts of binder and sand, respectively. Weak mortar will be washed out at and above the roof line, resulting in open masonry joints, or be disintegrated by the flue gases.

Wood beams, joints or partition members should be placed some 2 inches away from the chimney walls and the intervening spaces filled with mortar. The ends of floor boards can come nearer but it is desirable to leave a mortar-filled space around the chimney not less in thickness than the plaster.

Old chimneys are likely to be defective at the roof line from washing out of mortar and breaking of mortar joints by differential expansion of brickwork and lining that were initially not well bonded together for the whole length of the chimney.

Doors, Stairs and Exits

FOR ordinary interior construction there is little object in providing more protection for openings between rooms than is afforded by wood doors and frames of the ordinary designs. With well-protected basement ceilings or a fire-resistive first-floor construction a heavier wood door or the lighter type of metal or metal-clad door leading to the basement would be in accord with the conditions, considering that in this location the door is normally closed. For interior wood framing protected by the more effective methods previously outlined, and for full fire-resistive construction, doors heavier than the usual thin panelled type should be used.

For use in connection with fire-resistive construction, metal or metal-clad doors and frames are now obtainable suitable for use in dwellings. However, doors, in common with vertical trim, present little hazard from the standpoint of fire origin, and if open would have no effectiveness as fire stops, irrespective of type.

Stairs should preferably be enclosed with constructions inclusive of doors, giving protection commensurate with that of the other interior building members. Stairways that must be open below can usually be provided with closure at the top. All dwellings of over two stories should have two independent stairways with full enclosure for at least one of them. This is necessary in order to allow exit if one way is blocked by smoke or fire. Some door or window in stories above the ground floor should lead to a porch roof or veranda. This has been the means of saving lives in numerous instances where the other exits have been cut off by a fire in the lower part of the house.

Degree of Effectiveness

THE relative effectiveness of the various constructions and details discussed have been indicated to such extent as the limits of the present paper permit. The effectiveness as it concerns protection in a given location or with the amounts of combustible contents ordinarily present in dwellings can be given only for certain limiting conditions. Assuming a complete burning up of furniture and exposed details and trim with no subsequent fire extinguishment, it can be stated that the most effective protections for interior combustible constructions outlined in this paper will be ineffective in preventing ignition of the main building members and eventual destruction of the building. The modes and severity of the fire attacks have a wide range, as also the degree of fire extinguishment brought to bear so that for some less severe condition, the

(Continued on Page 30)

Commissioners in International Meeting

Heads of Insurance Departments of Various States of the Union and of Candian Provinces to Convene in Toronto

THE National Convention of Insurance Commissioners of the United States has accepted the invitation of the Prime Minister of Ontario, the Canadian Life Insurance Officers Association, and the Association of Superintendents of Insurance of the Provinces of Canada, to hold its Sixtieth Annual Session at the Royal York Hotel, Toronto, Canada, on the 17th, 18th, 19th and 20th of September, 1929.

The Association of Superintendents of Insurance of the Provinces of Canada will hold its Twelfth Annual Conference in Toronto at the same time.

The Opening Session on the first (Tuesday) morning will be a joint meeting in recognition of the international character of the insurance business and the problems common to insurance supervision in the United States and Canada. The business sessions of the National Convention and the Canadian Association will be conducted independently in accordance with their respective constitution and laws.

The entertainment features of the programme have been arranged by a special Convention Committee representing the insurance offices of Canada. All visitors attending the meetings of either the National Convention or the Canadian Association are invited to register with the Secretary of the Convention Committee in advance if possible or at the Royal York Hotel immediately upon arrival.

The business sessions of the Association of Superintendents of Insurance of the Provinces of Canada will be held on the 13th, 14th and 16th days of September and concluded, if possible, before the joint opening session on the 17th of September.

Communications and general inquiries with respect to local arrangements, including *reservations for accommodation at The Royal York Hotel,* should be addressed to Norman Watt, Secretary of the Convention Committee, 46 King St. West, Toronto, from whom *Registration Cards* may be procured *now* on application.

The program as announced follows:

TUESDAY, SEVENTEENTH
JOINT OPENING SESSION

10:00 A. M.

Chairman — Hon. Howard P. Dunham (Conn.), President, National Convention of Insurance Commissioners.

Vice-Chairman — Arthur E. Fisher (Sask.), President, Association of Superintendents of Insurance of the Provinces of Canada.

Addresses of Welcome—Hon. G. Howard Ferguson, Prime Minister of Ontario.

Hon. W. H. Price, Attorney-General and Minister in charge of Ontario Insurance Department.

His Worship, Samuel McBride, Esq., Mayor of the City of Toronto.

Responses—Hon. Clarence Wysong (Ind.), First Vice-President, National Convention of Insurance Commissioners.

H. G. Garrett (B. C.), Vice-President, Association of Superintendents of Insurance of the Provinces of Canada.

Presidential Addresses—Hon. Howard P. Dunham (Conn.), President, National Convention of Insurance Commissioners.

Arthur E. Fisher (Sask.), President, Association of Superintendents of Insurance of the Provinces of Canada.

BUSINESS SESSION

National Convention of Insurance Commissioners

Call of States:

Call of Committees:

2:30 P. M.

Sight-Seeing Trip around Toronto and environs, leaving Royal York Hotel, 2:30 p.m.

Golf Tournament. A Championship Cup has been provided by the Convention Committee for the best net score. All visitors are eligible. Advance entries by mail addressed to the Secretary would be appreciated. (See Registration Cards.)

8:00 P. M.

Moonlight Excursion by boat on Lake Ontario. Boat leaves C.S.L. dock, foot of Bay Street, 8:00 p.m. Dancing (informal dress).

MIDNIGHT

Annual Pamunkey Pow-Wow.

WEDNESDAY, EIGHTEENTH
BUSINESS SESSION

National Convention of Insurance Commissioners

10:00 A. M.

"Automobile Merit Rating": Hon. John E. Sullivan, Commissioner of Insurance, New Hampshire.

Discussion: Hon. Clarence C. Wysong, Commissioner of Insurance, Indiana.

Committee Meetings.

2:00 P. M.

Reports of Committees.

"Disability Clauses in Life Insurance Policies"—(General Discussion: total time limited to two hours).

4:30 P. M.

Reception—By His Honour the Lieutenant-Governor of Ontario at Government House.

Afternoon Tea.

7:30 P. M.

Banquet—Chairman, T. G. McConkey.

Address — Hon. G. Howard Ferguson, Prime Minister of Ontario. Introduced by Leighton McCarthy, Esq.

Address—Hon. Howard P. Dunham, President, National Convention of Insurance Commissioners. Introduced by Arthur B. Wood, Esq.

10:00 P. M.

Grand Ball—(Formal.)

Note—All visitors now or heretofore associated with any state or provincial Insurance Department, and their families, are invited to the banquet and ball as guests of the Convention Committee, upon registration with the secretary. Invitations and tickets will be issued to all others by the secretary of the Convention Committee upon registration with him and payment of $5.00 per ticket.

THURSDAY, NINETEENTH
BUSINESS SESSION

National Convention of Insurance Commissioners

10:00 A. M.

"Investments of Insurance Companies"—Hon. Albert Conway, Superintendent of Insurance, New York.

Discussion—Hon. Ray A. Yenter, Commissioner of Insurance, Iowa.

"The Agency Situation"—Hon. C. D. Livingston, Commissioner of Insurance, Michigan.

Discussion—Hon. Matthew Taggart, Commissioner of Insurance, Pennsylvania.

AFTERNOON AND EVENING

Trip to Niagara Falls and the Chippawa Development of the Hydro-Electric Power Commission of Ontario, leaving Royal York Hotel at 1:30 p.m. Dinner at the Refectory, Niagara Falls, as guests of the Prime Minister and the Government of the Province of Ontario. (Informal.)

FRIDAY, TWENTIETH
BUSINESS SESSION

National Convention of Insurance Commissioners

10:00 A. M.

Annual Report of Secretary.

Reports of Committees.

Resolutions.

Executive Session.

2:00 P. M.

Unfinished Business.

Election of Officers.

LADIES' PROGRAMME

TUESDAY

Afternoon (2:30)—Ladies are invited to take the Sight-Seeing Trip. Any ladies who desire to play golf should register with the secretary.

Evening (8:00)—Moonlight Excursion.

WEDNESDAY

Luncheon at the Royal Canadian Yacht Club (Centre Island). Boat leaves R.C.Y.C. dock (foot of Bay Street) at 12:15.

Afternoon (4:30)—Reception at Government House.

Evening (7:30)—Banquet at the Royal York Hotel followed by Grand Ball.

THURSDAY

Afternoon and Evening—Trip to Niagara Falls and Dinner.

FRIDAY, THIRTEENTH

Association of Superintendents of Insurance of the Province of Canada

10:00 A. M.

Annual Report of Secretary.
Introduction of Resolutions.
Committee Reports—Presentation and consideration in following order:

LIFE

1. Desirability of Further Revision of Provincial Laws Respecting Life Insurance Reserve:
   Brief report in furtherance Resolution "A," 1928 Conference (Proceedings page 19) presented by the Consulting Actuary, Ontario Department of Insurance.
2. Statutory Conditions in Life Contracts:
   Report of Special Committee (British Columbia and Saskatchewan) in furtherance Resolution "B," 1928 Conference (Proceedings page 20) presented by Mr. Garrett.
3. Authority of Life Insurance Agents:
   In relation to placing, i.e., "brokering" business with other companies; review of existing laws; desirability of uniform provision. See Resolution "C" par. 2, 1928 Conference (Proceedings page 21). Presented by Mr. Foster.

GENERAL

4. Limitation of Risk:
   Consideration of Report No. 6 presented to 1928 Conference (Proceedings page 141) in furtherance Resolution "E" (page 21).
5. Rebating:
   In furtherance reference thereto in Annual Report of Secretary to 1928 Conference (Proceedings page 89 at page 93); special report by Alberta in furtherance Resolution "F" (page 21) presented by Mr. Brace.
6. Annual Statement Blanks:
   Report of Standing Committee on Blanks, presented by W. K. C. Campbell, C.A., Chief Inspector, Ontario Department of Insurance.
7. The Credit Evil and Free Insurance:
   Special Report by Ontario in furtherance Resolution "H," 1928 Conference (Proceedings page 22) in furtherance of Report No. 5 (page 140) and Address by Col. A. E. Kirkpatrick (page 48) presented by Mr. Foster.
8. Uniform Definitions:
   Consideration of Report No. 10 presented to 1928 Conference (Proceedings page 170) in furtherance Resolution "T" (page 27).

FIRE AND CASUALTY

9. Fire Insurance Legislation:
   Report by Saskatchewan covering multiple coverages such as tornado and windstorm in furtherance Resolution "L," par. 6, 1928 Conference (Proceedings page 24) presented by Mr. Fisher.
10. Automobile Insurance Legislation:
    Report by Ontario covering inter alia modified written application for Dealers policies, 1928 Conference (Proceedings page 25, Resolution "N"), presented by Mr. Foster.
11. Licensing of Insurance Adjusters:
    Report by British Columbia in furtherance Resolution "Q," 1928 Conference (Proceedings page 26) and Report No. 18 (page 214).
12. Over-Insurance of Fire Risks:
    Consideration of Report No. 12 presented to 1928 Conference (Proceedings page 188) in furtherance Resolution "R" (page 27).
13. Accident and Sickness Insurance:
    Report by British Columbia and Ontario in furtherance Resolution "S," par. 1, 1928 Conference, Proceedings (page 27) respecting Division II of 1928 Report (page 192) in reference to the "Lang Shirt Case" (62 O.L.R. 83) 1929 S.C.R. 117; presented by Mr. Garrett.

2:30 P. M.

Considerations of Reports of Committees.

SATURDAY, FOURTEENTH

10:00 A. M.

Further Consideration of Reports of Committees.

12:45 P. M.

Luncheon at the Royal Canadian Yacht Club.
Boat leaves R.C.Y.C. dock at 12:45 p.m.

MONDAY, SIXTEENTH

10:00 A. M.

Further Consideration of Committee Reports until 11:15 a.m.

11:15 A. M.

Address—"Supervision of Super Insurers"
Clarence W. Hobbs, Esq., Ex-Commissioner of Insurance, State of Massachusetts; Special Representative, National Convention of Insurance Commissioners on National Council on Compensation Insurance.

2:00 P. M.

Private Executive Session.

National Convention of Insurance Commissioners

President—Howard P. Dunham (Conn.).
1st Vice-President—Clarence C. Wysong (Ind.).
2nd Vice-President—Jess G. Read (Okla.).
Secretary-Treasurer—Joseph Button (Va.).
Executive Committee—S. A. Olsness (N. D.), John E. Sullivan (N.H.), D. C. Lewis (S.D.), Dan C. Boney (N.C.), Clare A. Lee (Ore.), C. D. Livingston (Mich.), Ray A. Yenter, Chairman (Ia.).

Association of Superintendents Insurance for the Provinces of Canada

President—A. E. Fisher (Sask.).
Vice-President—H. G. Garrett (B.C.).
Secretary-Treasurer—R. Leighton Foster (Ont.).
Executive Committee—Henry Brace (Alta.), Charles Heath (Man.).

Convention Committee

Representing the Insurance Offices of Canada and the Canadian Superintendents
C. S. MacDonald, John A. Tory, Lyman Root, C. A. Withers, V. Evan Gray, R. Leighton Foster.
T. G. McConkey, Chairman.
Norman Watt, Secretary, 46 King St. W., Toronto.

Maryland and Delaware Federation Recently Organized

THE Maryland and Delaware Federation of Mutual Fire Insurance Companies which was organized February 14, 1929, by a group of Pennsylvania, Maryland and Delaware Mutuals doing business in Maryland and Delaware, is now in full swing and the member Companies are beginning to enjoy its benefits. The Office of the organization is located in the Masonic Building, Havre de Grace, Maryland. The Federation has as its object closer co-operation among the Mutual Companies and the general betterment of mutual fire business.

There is an Inspection Department which keeps six field engineers on the road looking over risks and making suggestions to the assureds whereby they may better their properties and therefore also better the risks as far as the insurance companies are concerned. This Department claims an unusual service as the reports give a complete physical report and ground plan of all buildings along with the usual moral report. The inspection reports also include any suggestions or requirements necessary to make a risk a desirable one if possible. These reports cover all classes of business including farms.

The Officers of the organization are: President, Richard Dallam, of the Mutual Fire Insurance Company in Harford County, Bel Air, Maryland; Vice-President, Shadrach G. Sparks, of the Mutual Fire Insurance Company in Baltimore County, Baltimore, Maryland; Secretary, F. A. Hoffman, Havre de Grace, Maryland, who is also Manager of the Inspection Service; Treasurer, Walter B. Young, of the Mutual Fire Insurance Company in Harford County, Bel Air, Maryland.

All Mutual Fire Insurance Companies licensed to do business in the states of Maryland and (or) Delaware are invited to investigate this organization and are eligible to receive the Inspection Service at a very nominal cost.

Fourth of July

(*Continued from page 8*)

(g) Where drygoods or other materials of a highly inflammable nature are manufactured, stored or sold;

(h) Where matches, rosin, turpentine, petroleum, or any liquid product thereof, hemp, or explosives are manufactured, stored or kept for sale.

Extinguishers:—All holders of permits under this section shall keep on the premises covered by the permit, in a convenient location, at least 6 ten quart buckets of water and 6 ten quart buckets of sand, fit and ready to use in case of fire.

Firecrackers:—A permit may be issued to a person doing a general storage or warehouse business for the storage, in a duly authorized warehouse, of firecrackers composed only of sulphur, saltpeter and charcoal mixtures, and the quantity of firecrackers to be so stored shall in each case be stated in the permit.

Local Transportation:—No person shall carry or transport through the streets fireworks exceeding in wholesale market value the sum of $10, unless they are securely packed in spark-proof wooden or metal packages having plainly marked on the outside thereof in large legible letters the words FIREWORKS — EXPLOSIVE, but under no circumstances shall any person carry or transport fireworks in a tunnel or subway under the streets, lands or waters of the city, to which the public has access.

Manufacturer's Mark:—All fireworks stored or sold, except imported Chinese firecrackers, shall bear the name of the manufacturer plainly marked upon the outside of each package and shipping case.

Quantities Limited:—No permit shall be issued for the storage and sale of fireworks in any building to an amount in excess of $1,500 wholesale market value.

Street Sales:—No person shall sell or exhibit for sale any fireworks on sidewalks, streets, parks, squares, bulkheads, piers or other public places.

Window Displays:—No person shall keep, store or exhibit fireworks in the windows or doors of the premises covered by a permit for the storage and sale thereof.

These regulations have cut to a minimum the use of fireworks in New York City. Fireworks are still for sale in the outlying suburbs, and some people still buy their stock of fireworks at such stores. But generally, New York City, which once resounded from sunrise to midnight with the discharge of fireworks is now silent on Independence Day. And hundreds of people are saved every year from death and injury.

But a still more widespread regulation of the discharge and storage of fireworks is urgent if any considerable advance is to be made. It would seem that the most satisfactory way of celebrating the birth of our nation would be to have fewer fires on its birthday than on other days of the year.

Factory Fires

(*Continued from page 15*)

Yet with these facts in mind, a consideration of statistics of probable causes of fire is instructive. For example, of 1,325 factory fires occurring during 1928, 253 were caused by electrical defects in wiring or machinery. Except during the month of July, when fires started by lightning bolts headed the list with 17, electrical fires always had the lead. Two hundred and fifty-three such fires resulted in losses amounting to $415,400. And this figure is merely a representative percentage, rather than the grand total of all such fires occurring in the United States during the past year.

Fourth Annual Claims Executive Conference

National Association

of

Mutual Casualty Companies

and

National Association of Automotive Mutual Insurance Companies

at

HOTEL CLEVELAND
Cleveland, Ohio
October 15, 16, 17, 1929

MOTORS, baking ovens, generators, lighting pendants and automatic starters are being used in increasing numbers in modern factories, and their greater use entails greater risk. A study of statistics covering several years shows this distinctly for during the month of July when many factories are closed because of seasonal slackness, or for repairs, and part or all of the machines are idle, the number of fires attributed to electrical causes is materially smaller than for other periods of the year.

Obviously, there should be a remedy for such a situation. More careful inspection of machinery and electrical wiring, more attention to proper maintenance and better education of employees, should aid in cutting the number of fires originating in those apparatuses which are primarily designed to make factory operations better and more economical.

The importance of careful inspection and well patrolled buildings is frequently discussed, but from reports of fires which are continually coming in, it is apparent that a good deal more must still be done before the efficiency of inspectors and watchmen will have reached its height. A few months ago, a watchman discovered a fire in a small room in which the switchboard was located. Unfortunately, the door to the room was barred and locked, and it was impossible for the watchman to gain access without forcibly breaking in. After watching the fire for some time, he decided that it was not gaining headway, and that it would be "safe" to leave it until morning when the room could be opened. Although he watched the fire as closely as possible, his other duties necessitated that he make a round of the building, at frequent intervals. In one of these intervals, the fire could have gained such a headstart, that it would have been impossible for him to control it. Good fortune rather than the good sense of that watchman saved the factory.

Watchmen who are to guard buildings against the peril of fire, must be considerably more than clock punchers. They must be men who know how to use their heads as well as their hands, and who can make the correct decision when emergencies arise.

The responsibility for calling the city, or the mill fire departments often rests with the watchman. He must know when a fire can be handled by one man, and when it will require fighting by many men.

Many large factories located in small towns, maintaining comparatively inadequate fire fighting units, have drilled their own group of fire fighters. Men who work at other tasks and who either have volunteered, or who have been chosen by the management as fire fighters, receive intensive drills in the handling of ladders, hoses, and chemicals, which have often stood them in good stead when actual fire conditions have prevailed. Frequently, the fire fighters of several factories have cooperated in fighting the blaze in one group of buildings, and at all times these small units work with the local firemen. They have helped immeasurably in keeping fire losses low. But their work is still only like a single hose line playing on a big blaze. Fire losses in factories as well as in other buildings will not be reduced until every man and woman working in the plant is made conscious of the fire hazard, nor until careful inspection makes the dangerous breakdown of machinery a rarity, and good housekeeping usual.

Dwelling Construction

(Continued from Page 26)

given protections will be adequate. The less effective protections will also be adequate against correspondingly decreased severity of fire attack. Since it must be premised that the less severe fire conditions occur as frequently as those in the upper range, a gain in fire safety is obtained by applying the less effective protections or constructions, assuming that they are the best that under the conditions can be had. It is as important to stop the small fire as the one that has attained greater proportions and all the protections discussed are effective to greater or less extent. Those at the lower end of the scale, however, give only minor and temporary protection.

Incombustible and fire-resistive construction can without difficulty be made to withstand a complete burning out of combustible contents of dwelling construction without collapse of structural members. Under this limiting condition the building will suffer damage mainly in finish, details and trim. This type of construction is, however, resistive against the whole range in fire attack, and with the moderate amounts of combustibles present with residential occupancy, the chances for confining the fire to near its origin are greater than for occupancies involving larger amounts. With dwellings, the character of the building construction should therefore have a very decided effect in decreasing the fire loss. In this country we have had experience with fire-resistive residential construction mainly as large multiple dwellings or apartments. With these the experience has been favorable and a degree of fire safety has been realized that would have been obtainable with difficulty by any other means. In some cities of southern Europe it has been used for a considerable time for smaller residential buildings with a minimum amount of combustible interior trim. Large loss from residential fires, as also loss of life in such fires, is very infrequent, the fire being almost always confined to near its point of origin with minor fire-extinguishing effort.

Why Resorts Burn

(Continued from Page 22)

building, where the fire hazard is the greatest. But only a few states in the union require automatic sprinklers by law.

(Continued in Last Column)

Wisconsin Company Erects New Building

UNDER the leadership of G. W. Wilkinson the Wisconsin Automobile Insurance Company and allied organizations have grown to such proportions that a new building has been erected in Monroe, Wisconsin, to provide room to handle a steadily increasing business.

G. W. WILKINSON

The structure is of light brown decorative brick, three stories high and stands on the northwest corner of Monroe's Court House Square. Hundreds of people not only from the home city but from the surrounding territory visited the new quarters of the company on the opening day.

G. W. Wilkinson, organizer of the company, is secretary and general manager. Other officers are as follows:

J. H. Durst, president; C. R. Schepley, vice-president; C. W. Bennett, treasurer.

Directors

G. W. Wilkinson, C. L. Stillman, H. B. Hughes, P. N. Snodgrass, E. B. Lewis, J. H. Durst, C. R. Schepley, C. W. Bennett.

The Wisconsin Automobile Insurance company operates now in thirteen states in the union. In volume of automobile premiums written it ranks as sixteenth among the mutual insurance companies in the United States.

Why Resorts Burn

(Continued from First Column)

Enterprising resort owners are growing aware of the value of sprinklers in increasing public confidence, and by such installations, are both decreasing the fire hazard (and incidentally their insurance premiums) and making the most of the advertising value of sprinklers. A number of first class resort hotels advertise their sprinkler systems on their letterheads; others place cards in guestrooms. Which led one guest to pen the following letter to his friend:

At the Arlington Hotel in Richmond, Ind., this sign is on all the stationery and in every room:

THIS HOTEL IS FULLY EQUIPPED WITH AUTOMATIC SPRINKLERS. STATISTICS SHOW THAT LOSS OF LIFE HAS NEVER OCCURRED IN A SPRINKLERED BUILDING. IN CASE OF FIRE YOU MAY GET WET BUT NOT BURNED.

To me that's a wonderfully consoling thought. Before I go to sleep, I always recite this little prayer inspired by the sign:

Now I lay me down to sleep,
Statistics guard my slumber deep;
If I should die I'm not concerned,
I may get wet but I won't get burned.

CERTAINLY, fire retared structures would be more satisfactory than the frame buildings now popularly used for summer resorts. But because of the greater cost of fireproof construction, it is improbable that it will supplant the wooden structures. The problem in summer resorts is, therefore, largely one of protection for the wooden buildings.

The separation of the kitchen, laundry, boiler room, and other working quarters from the building in which guests are housed, would help to decrease the fire hazard. Or, such an arrangement being impossible, the equipping of these quarters with sprinklers would reduce the danger of a serious fire.

Besides, there should be more careful maintenance of fire fighting equipment. With adequate equipment at hand, many fires would never gain headway. A regular patrol of every resort, in the closed season, as well as in the open season, would also decrease the hazard. And it will only be when such precautions are taken that our summer resorts will stop burning. Only when the public, as well as the resort proprietors become conscious of the fire hazard, will the dangerous conditions be removed, and our resorts cease to supply kindling for million dollar bonfires.

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Automobile Mutual Liability Insurance Company
Beacon Mutual Fire Insurance Company

An organization of Massachusetts Mutual Insurance Companies associated under one management and devoted to reducing insurance costs. Dividends 20% to 25%.

Twin Mutual Group

211 Congress Street
Boston, Mass.
A. Shirley Ladd, Secretary

WORTHY OF ITS TRUST

Combined Statement of Companies

Comprising

Federal Hardware & Implement Mutuals

DECEMBER 31, 1928

ASSETS

Cash and Investments	$9,812,751.15
Accrued Interest	129,118.58
Other Assets	1,408,720.78
	$11,350,590.51

LIABILITIES

Reserve for Unearned Premiums	$6,139,476.85
Reserve for Unadjusted Losses	462,375.56
Other Liabilities	251,787.64
SURPLUS	4,496,950.46
	$11,350,590.51

"FEDERAL" Has Always Kept Faith

Cash Dividends Paid Policyholders Since Organization

1905—	$ 15,416.79	1917—	$ 435,088.12
1906—	26,455.35	1918—	557,191.13
1907—	52,599.93	1919—	849,973.17
1908—	73,204.55	1920—	1,181,287.94
1909—	105,379.88	1921—	1,681,811.54
1910—	136,243.10	1922—	1,912,406.33
1911—	159,864.70	1923—	2,429,321.88
1912—	183,251.08	1924—	2,623,490.89
1913—	209,343.34	1925—	2,932,462.39
1914—	246,501.89	1926—	3,216,952.31
1915—	289,797.29	1927—	3,497,850.28
1916—	354,386.15	1928—	3,808,564.89

Total
$26,996,508.51

Federal Hardware & Implement Mutuals

Retail Hardware Mutual Fire Ins.Co.
OF MINNEAPOLIS, MINNESOTA

Hardware Dealers Mutual Fire Ins.Co.
OF STEVENS POINT, WISCONSIN

Minnesota Implement Mutual Fire Ins.Co.
OF OWATONNA, MINNESOTA

A Consistent Record of Successful Accomplishment

The strength and soundness of the "N-R-M" is shown by a resume of its condition at the end of the last several years. This makes an interesting study for those who wish to make greater use of this insurance company and of its service.

Year	Cash Assets	Legal Reserves	Net Cash Surplus	Losses Paid	Dividends to Policy-Holders
1919	$ 71,952.93	$ 21,409.44	$ 50,543.49	$ 38,163.15	$ 13,235.72
1920	96,190.46	44,668.49	51,521.97	74,594.31	37,065.46
1921	108,911.27	55,629.98	53,281.29	141,123.89	88,231.51
1922	240,695.88	122,635.77	118,060.09	243,262.61	133,170.18
1923	287,796.02	167,502.08	120,293.94	438,017.17	206,615.38
1924	334,308.77	202,879.93	131,428.84	770,558.14	324,425.32
1925	454,392.85	304,230.73	150,072.12	1,102,352.92	475,213.90
1926	580,281.33	379,137.30	201,144.03	1,571,912.20	695,834.77
1927	707,576.08	456,063.34	251,512.74	1,992,955.83	990,693.81
1928	750,537.06	469,939.79	280,597.27	2,453,039.51	1,283,427.20

NATIONAL RETAILERS MUTUAL INSURANCE COMPANY

JAMES S. KEMPER, *President*

Mutual Insurance Building, Chicago, U.S.A.

Atlanta	Cleveland	Milwaukee	New York	Pittsburgh
Baltimore	Columbus	Minneapolis	Omaha	San Francisco
Boston	Los Angeles	Newark	Philadelphia	Seattle
Buffalo				Syracuse

Annual Cash Dividends to Policyholders Since Organization